EDGAR A. MEARNS PAPERS
1872-1913

Box 7 Folder 12

Eggs of Urubitinga anthracina

47 x 59

47 x 58 mm.

Everything in this book on mammals, so far as the Mexican boundary region is concerned, has been carded for the mammal report.

Febr. 5, 1902. E.A.M.

April 1887. Bloody Basin, A. T.

Pipilo fuscus mesoleucus. – Nuptial song: "Chew-we-chu-we-chu-we-chu-we-chu-we," rapidly delivered. Also "I-wit-ts-wit-chew-we-chew-we-chew-we."

		lbs	oz.
Aythya affinis	Febr. 29, 1888.	1	8
Aythya collaris	Febr. 29, 1888.	1	10
Charitonetta albeola	Mar. 2, 1888.		14
Merganser americanus	Mar. 2, 1888.	3	3
Anas carolinensis	Mar. 2, 1888.		11
Anas boschas	Mar. 5, 1888.	2	1½
Anas boschas	Mar. 5, 1888	2	3½
Lepus arizonae	Mar. 5, 1888.	1	8
Melanerpes uropygialis	Mar.		2½
Colaptes cafer	Mar.		5

Comparison of a good series of Virginia Rails (Rallus virginianus) from Arizona with a small series from Minn., Conn., Pennsylvania, etc., shows the Arizona specimens to be a little paler, more olaceous above, with a larger bill; but they are much too near each other to be separated as subspecies, the difference in color being very slight.
E. A. M.

Gallinago delicata. – Comparison of a large series from Arizona and various other parts of the U. S., including fine series from Fla. and Conn. shows this species to be very constant in its markings. The eastern bird is a trifle darker, Fla. birds being a little smaller than those from Arizona or Conn.

January 23rd 1888. Ft. Verde, Arizona.

5988 Zonotrichia intermedia. ♂ juv. Just acquiring adult plumage. No measurements.
5989 Turdus aonalaschkae. ♀ ad. Measurements on Table.
5990 Anthus pensilvanicus. ♂ ad. do
5991 Sayornis saya. ♀ ad. do
5992 Melospiza fasciata montana. ♀ ad. do
5993 Dendroica auduboni. ♀ ad. do

January 24th 1888. Ft. Verde, Ariz.

5994 Turdus aonalaschkae. ♀ ad. Measurements on Table.
5995 Spizella socialis arizonae ♀ (ad.?) do
5996 Junco hyemalis shufeldti ~~oregonus~~. ♀ ad. do

January 25th 1888. Ft. Verde, A. T.

5997 Thryothorus bewickii bairdi. ♀ ad. Measurements on Table.
*5998 Spinus pinus ad. *Shot by E. W. M. do
*5999 " " ♀ ad. do do
*6000 " " ♀ ad. do do
*6001 " " ♀ ad. do do
*6002 " " ♀ ad. do do
*6003 " " ♀ ad. do do
*6004 Colaptes cafer. ♂ ad. do do
6005 " " ♂ ad. – ~~xx~~ – do
6006 Branta canadensis occidentalis ~~xx~~ do
6007 " " " ~~xx~~ do
6008 " " " ~~xx~~ do

Note. – Spinus pinus is feeding in immense flocks, beside the sluice of the Verde River, upon the seeds of the yellow cafer. Mrs. M. shot six at one shot. Spinus tristis is also common, as is S. psaltria, both feeding on seeds of sycamore balls.

January 28th 1888. Ft. Verde, A. T.

6009 Pipilo aberti ♂ ad. Measurements on Table. These birds are mating now. Their testicles are much enlarged. When courting, they commonly fly up into cottonwood trees

January 29, 1888. Ft. Verde, Ariz.

6010 Philo albiti. ♂ad. Measurements on Table.
6011 Sialia mexicana ♀ad. do

List of Specimens packed Jan. 29, 1888, in Box "No. 2", weight 125 pounds.

Merganser americanus (Cass.).
5927 ♂ad. Jan. 3, 1888. Verde River at Fort Verde, Arizona.
5966 ♂ad. Jan. 11, 1888. do

Lophodytes cucullatus (Linn.).
5929 ♂ad. Jan. 4, 1888. Montezuma Well, Beaver Cr., 12 m. N. of Fort Verde, Arizona
5930 ♀ad. Jan. 4, 1888. do
5938 ♂ juv. Jan. 7, 1888. Verde River, at Fort Verde, Arizona.
5939 ♂ juv. Jan. 7, 1888. do

Anas boschas Linn.
5931 ♂ad. Jan. 4, 1888. Montezuma's Well, Beaver Creek, 12 m. N. of Ft. Verde, Ariz.

Anas strepera Linn.
5690 ♀ad. Nov. 7, 1887. Beaver Creek, near Fort Verde, Arizona.
5691 ♀ad do do

Spatula clypeata (Linn.).
5913 ♂ young ad. Dec. 31, 1887. Verde River at Fort Verde, Arizona.
5967 ♂ " " Jan. 14, 1887. do

Chen (rossii?)
5677 ♀ad. Oct. 24, 1887. Verde River, at mouth of Beaver Creek, Arizona.

Branta canadensis occidentalis (Baird).
5827 ♂ad. Dec. 18, 1887. Verde River, at mouth of Beaver Creek, Arizona.
5904 ♀ad. Dec. 28, 1887. Montezuma Well, Beaver Creek, 12 m. N. of Fort Verde, Arizona.
5932 ♂ad. Jan. 4, 1888. Beaver Creek, near Fort Verde, Arizona.
5954 ♀ad. Jan. 10, 1888. Verde River, near Fort Verde, Arizona.

Branta bernicla (Linn.).
5678 ♂ad. Oct. 24, 1887. Verde River, near Fort Verde, Arizona.

Plegadis guarauna (Linn.).
~~5456 ♂ Jan. 30, 1887. Mormon Lake, Mogollon Mtns, Central Arizona,~~
5238 ♀ad. April 12, 1887. Beck's Lake, upper Verde Valley
~~Wt. 6000 grs.~~ Erroneously labelled "No. 5456"

Tantalus loculator Linn.
5016 ♀ad. Sept. 14, 1886. Verde River, at Fort Verde, Arizona.
5017 ♂ad. do do

Botaurus lentiginosus ~~Linn.~~ (Montag.).
4755 ♀ad. April 20, 1886. Beck's Lake, Upper Verde Valley.
4756 ♀ad. do do
4757 ♀ad. do do

Ardea herodias Linn.
4136 ♀ad. July 25, 1885. Verde River, at Fort Verde, Arizona

Ardea egretta Gmel.
4138 ♀ (ad.?) July 27, 1885. Verde River, at Fort Verde, Arizona.
4139 ♂ad.?) do do
4140 ♂ juv. do do
4141 ♀ juv. do do

Ardea virescens Linn.
5249 ♂ad. April 17, 1887. Fort Verde, Arizona.

Recurvirostra americana Gm.
5260 ♂ad. April 24, 1887. Verde River at Fort Verde, Arizona.

Meleagris gallopavo mexicana (Gould).
3644 ♀ad. Dec. 19, 1884. Mogollon Mtns, near Fort Verde, Arizona.
3720 ♀ad. Jan. 16, 1885. Oak Creek, 25 m. N. of Fort Verde, Arizona.

Cathartes aura (Linn.).
5686 ♂ juv. Nov. 1, 1887. Fort Verde, Arizona.

Haliaeetus leucocephalus (Linn.).
5970 ♀ad (not quite mature). Jan. 8, 1888. Mogollon Mtns, Central Arizona. Was eating a deer when shot!

Strix pratincola Bonap.
5661 ♂ad. Oct. 3, 1887. Fort Verde, Arizona.

Falco mexicanus Schleg.
5680 ♀ drab plumage. Oct. 24, 1887. Fort Verde, Arizona.
5825 ♂ " " Dec. 16, 1887. do

Bubo virginianus subarcticus.
3687 ♀ad. Jan. 4, 1885. Fort Verde, Arizona.
4221 ♀ad. Sept. 17, 1885 do
4262 ♀ad. Oct. 28, 1885. Beaver Creek, near Fort Verde, Arizona.
4263 ♀ad. Oct. 30, 1885. Fort Verde, Arizona.
4358 ♀ad. Dec. 26, 1885. do
4406 ♀ad. Jan. 15, 1886. do Erroneously tagged "4985".
5820 ♀ad Dec. 12, 1887 do
5821 ♀ad Dec. 12, 1887. do

(over)

Archaeological:-

736 Cane of mulberry-wood, found standing against the wall of a closed cave-dwelling, below the Middle Verde Settlement, Verde River, Arizona. We entered the front room by enlarging the burrow of what proved to be an aboriginal Skunk (Conepatus), whom we found dead and dessicated within. Behind this front chamber were several others, communicating; and in them were found fragments of a net, circles of grass, etc., used for head-mats and cushions, food substances, cotton cloth, implements, etc.

2183 to 2186 Pieces of matting from cave-dwellings in Montezuma's Well, and on Clear Creek, Arizona.

2187 Bundle of reeds covering skeletons found in caves on Clear Creek, Arizona.

The following specimens were not catalogued in the proper place:

6012 Fulica americana. pullus. Mormon Lake, Mogollon Mtns, Arizona. Altitude, feet. Downy nestling.

6013 Picicorvus columbianus ♂ juv. San Francisco Mountains, Arizona.

6014 Picicorvus columbianus ♀ juv. Same locality as above.

February 1, 1888. Ft. Verde, Arizona.

6015 Merganser americanus. ♂ ad. Measurements on Table.

February 3rd, 1888. Ft. Verde, Arizona.

6016 Glaucionetta clangula americana. ♂ ad. Fort Verde, A.T. Measurements on Table. See page 83.

From Payson, Arizona, February 3, 1888:—

6017 Cyanocitta stelleri macrolopha. ♀ ad. Measurements on Table

6018 " " " ♀ ad. do

6019 " " " ♂ ad. do

Payson, Arizona. Febr. 3, 1888

6020 Aphelocoma woodhousei ♂ ad. Measurements on Table

6021 " " ♀ ad. do

6022 Accipiter velox ♂ juv. do

6023 Carpodacus frontalis. ♂ ad. do

6024 Pipilo maculatus megalonyx. ♂ ad. do

6025 Carpodacus frontalis ♂ ad. No measurements.

Payson, Arizona

6026 Parus wollweberi. ♀ ad. Measurements on Table.

6027 " " ♀ ad. do

6028 " " ♂ ad. do

6029 Regulus calendula. ♂ ad. do

6030 Dryobates scalaris. ♀ ad. do

6031 Colaptes cafer ♂ ad. do

From Fort Verde:—

6032 Scolecophagus cyanocephalus. ♂ ad Measurements on Table

6033 Anas boschas. ♂ ad. do

Febr. 6, 1888. Ft. Verde, Arizona.

6034 Pipilo maculatus megalonyx. ♂ ad. Measurements on Table.

Febr. 7, 1888. Ft. Verde, Arizona.

6035 Colaptes cafer. ♀ ad. Measurements on Table.

6036 Ceryle alcyon. ♂ ad. do

6037 Merganser americanus. do

6038. " " do

Febr. 8, 1888. Ft. Verde, Arizona.

6039 Falco sparverius. ♂ ad Measurements on Table.

6040 Rhynchophanes mccownii. ♂ ad. do

6041 Scolecophagus cyanocephalus ♂ ad. do

6042 " " ♂ ad. do

6043 " " ♂ ad. do

6044 " " ♂ ad. do

Febr. 9 1888. Ft. Verde, Arizona.

6045 Falco mexicanus. ♀ dark plumage. Measurements on Table.

6046 Merganser americanus. ♀ ad. do

6047 Ardea herodias: ♀ ad. do

Febr. 10, 1888.

6048 Merganser americanus. ♂ ad. Measurements on Table

6049 Accipiter cooperi. ♂ ad. do

Received a box of birds from Joe Gibson, killed at Payson, Arizona, Febr. 10, 1888.

6050 Passerella ilaca schistacea (Baird). ♂ad Measurements on Table. Irids, hazel. Bill yellowish on mandible and sides of maxilla at base, becoming blackish at tip. Legs, feet and claws, brown. My first specimen. I have been one on Beaver Creek (Febr. 10, 1888).

6051 Sitta carolinensis aculeata. ♂ad Measurements on Table.

6052 " " " ♂ad. do

6053 Regulus calendula (♀?) ad. Crown ruby. do

6054 Sphyrapicus varius nuchalis. ♂ad. do

6055 " " " ♀ad do

This specimen has a red throat, although a very small space at base of bill is whitish. This is a sexal mark that I have not noted before. Some of those I have preserved many have been carelessly marked as males when in reality they were females, as I have never known until now that females have red throats as the males do. Is this generally known? It is good ground for declaring it to be specifically distinct from the Eastern Yellow-bellied Woodpecker. It might prove to a var of S. ruber or vice versa. An Apache spec. of mine has the red extending onto the breast.

6056 Aphelocoma sieberii arizonae. ♀ad. Bill slightly crossed. Measurements on Table.

6057 Aphelocoma sieberii arizonae ♀ad. In both of these specimens the bill is entirely black. do meas

6058. Eganocitta stelleri macrolopha ♂ad. Meas. on Table.

6059 " " " ♂ad do

6060 Sturnella magna neglecta. ♂ad. do

6061 Accipiter nisus. ♂juv. do

6062 Buteo borealis ♂ ad. Libiae not barred do. Stomach contained a Jumping Rat & Quail.

Febr. 13, 1888. Fort Verde, Arizona.

6063 Dafila acuta. ♀ad Measurements on Table.

6064 Aphelocoma woodhousei ♀ad. do

(Febr. 13th — Continued.)

6065 Melospiza fasciata montana. ♂ ad. Measurements on Table.

6066 " " " ♀ad. do

A box from J. G. Gibson, contained the following specimens, shot at Payson, Arizona, on Febr. 13, 1888:

6067 Aphelocoma woodhousei ad. Measurements on Table.

6068 " " ♂ad Measurements on Table.

6069 Merula migratoria propinqua ♂ad do

6070 Melanerpes formicivorus bairdi. ♂ad. do

6071 Parus wollweberi ad. do

6072 Regulus calendula ♂ad. (crown ruby) do

6073 " " ♀ (ad.?) (no ruby crown) do

6074 Falco sparverius ♂ ad do

6075 Junco hyemalis ~~oregonus~~ shufeldti ♂ ad. do

6076. " " " ♀ ad. do

February 15th, 1888. Fort Verde, Arizona.

6077 Bubo virginianus subarcticus ♂ ad. Measurements on Table. Weight 2 lbs., Avoirdupois. Stomach entirely empty.

Received a box of birds, shot at Payson, Ariz., by J. G. Gibson, Febr. 18, 1888.

6078 Sphyrapicus varius nuchalis. ♂ad. Measurements on Table.

6079 Accipiter velox ♂ad. Stomach contained Flicker

6080 Passerella ilaca schistacea. ♂ad. do

6081 Aphelocoma sieberii arizonae. ♂ad. do

6082 Parus inornatus griseus ♀ad. do

6083 " " " ♂ad. do

6084 " " " ♀ad. do

6085 Pipilo maculatus megalonyx. ♀ad. do

6086 " " " ♂ad. do

6087 " " " ♀ad. do

6088 Parus wollweberii. ♀ad. do

6089 " " ♂ad. do

6090 Sitta carolinensis aculeata. ♂ad. do

6091 Colaptes cafer ♂ad. do

6092 " " ♂ad. do

6093 " " ♀ad. do

6094 Aphelocoma woodhousei ♂ad. do

6095 Cyanocitta stelleri macrolopha. ♀ad Measurements on Table.
6096 " " " " ♀ad. do

Febr. 21, 1888. Ft Verde, Arizona.

6097 Aythya americana. ♀ad. Measurements on Table. Legs & feet gray; claws, plumbeous. Bill blue, squarely tipped with black.

Febr. 24th, 1888.

Cardinalis cardinalis superbus. - A fine male seen on the left fork of Beaver Creek, about two miles from Montezuma's Well.

Febr. 29th, 1888.

Returned from Beaver Creek last night, where I spent 6 days (Febr. 23 to Febr. 28) at Mehrens's ranch. I found a box of birds from Mr Jos. G. Gibson, shot at Payson, Arizona, Febr. 24, 1888. They came last Saturday, so I did not skin all of them as they were stale.

6098 Melanerpes uropygialis. ♂ad. Measurements on Table. Nape of neck more old gold than I remember in other specimens. Specimen preserved.
6099 Cardinalis cardinalis superbus. ♂ad Measurements on Table. Skin
6100 Phainopepla nitens. ♂ad. do. do
6101 Ceryle alcyon. ♂ad. Measurements on Table. Not skinned.
6102 Pipilo aberti. ♀ ad. do do
6103 Zonotrichia intermedia. ♀ad. do do
6104 Eremophila alp. arenicola ♀ad. do do
6105 Phainopepla nitens. ♀ad. do do
6106 " " ♀ad. do do
6107 " " ♂ad. do do
6108 " " ♂ad. do do

Birds shot on Verde River, Febr. 29, 1888.

6110 Aythya collaris. ♂ nearly ad. Measurements on Table.
6111 Aythya affinis ♀ad. do
There are a few blackish feathers on side of head but sex positively ♀.

March 2, 1888. Ft Verde, Ariz.

6109 Merganser americanus ♂ad. Breast pure white. I think this is peculiar to males that have just acquired the adult dress. The oldest ones have deepest salmon tint on their breasts. The carmine of bill changes to a darker, less brilliant tint as soon as the blood coagulates. Measurements on Table.
6112 Charitonetta albeola. ♂ad. Measurements on Table. Bill pale bluish gray, darker at base. Legs & feet, flesh color. Irides hazel.
6113 Amphispiza bilineata. ♂ad. Measurements on Table
6114 Turdus aonalaschkae. ♂ad. do
6115 Spizella socialis arizonae. ♂ad. do
6116 Zonotrichia intermedia. ♀ (ad.?) do

Received a box of birds, shot at Payson, Arizona, March 2, 1888, by Joseph G. Gibson.

6117 Melanerpes uropygialis. ♂ad. Measurements on Table. Alimentary canal filled with what looks like mistletoe fruit, but may be the "tunas" of prickly pear (Platopuntia).
6118 Cardinalis cardinalis superbus. ♂ad. Measurements on Table.
6119 " " " ♀ad. do
6120 " " " ♀ad. do
6121 Thryothorus bewicki bairdi. ♀ad. do
6122 Salpinctes obsoletus. ♂ad. do
6123 Turdus aonalaschkae. ♂ad. do
6124 " " ♂ad. do
6125 Pipilo maculatus megalonyx. ♂ad. do
6126. " " " ♂ad. do

Feb. 20th, 1888. Ft Verde, Arizona.

6127 Branta canadensis occidentalis. ♂ad. Measurements on Table.
6128 Gallinago delicata. ♂ad. do
6129 Harporhynchus crissalis. ♂ad. do Parent of set of two eggs. Eggs somewhat incubated. They were left in the nest 3 (three) days and no more had been deposited. Nest preserved.

~~6130~~

March 4, 1888. Fort Verde, A. T.

6130 Branta canadensis occidentalis. ♀ad. Measurements on Table. The white is pure and sharply contrasted against the gray of the under parts. This white patch includes the tibiae and extends farther forward than usual, and in a broader area, ending squarely at at a point nearly as far forwards as opposite the scapulo-humoral joint. It includes the whole belly but not the sides, except behind the legs. 18 tail-feathers.

6131 Charitonetta albeola. ♂ad. Measurements on Table.

6132 Mergus " " ♂ad do

Mergus ~~polyglottus~~ first seen.

March 8, 1888. Ft Verde, Arizona

6133 Melanerpes uropygialis ♀ad. Measurements on Table. This the only Gila Woodpecker that I ever saw in the Verde Valley.

March 20, 1888. Fort Verde, Ariz.

Carpodacus cassini. – During this month enormous flocks have been driven down out of the surrounding hills. They utter a chattering note resembling the Eastern Purple Finch.

March 22nd, 1888. Ft. Verde, Ariz.

6134 Sayornis nigricans. ♂ ad. Measurements on Table. One of a pair that were commencing to build. I did not know this until I went to pick up my specimen. The nest was in the side of a tunnel through a hill, through which runs the acequia that waters the lower ranches of the Lower Verde Valley.

Stelgidopteryx serripennis. – A number were seen, the first this season. All were single birds. One was seen to alight against the side of a band and inspect some holes.

Note. The first specimen of Anas cyanoptera was shot February 29th (leap year) 1888. Others were shot March 4th.

Aphelocoma woodhousei and Pipilo mac. megalonyx have been common down in the Verde bottom all winter. In other years they have been scarce below the foothills.

March 26th, 1888. Ft. Verde, Arizona.

6135 Bubo virg. subarcticus. ♀ad. Measurements on Table. This bird has plucked off all of the down from the under part of her body, as well as a large quantity of the large feathers, to line her nest with. The ovary shows that 4 eggs have been laid. I could not find the nest. Stomach nearly empty.

6136 Passerculus savanna alaudinus. ♀ad. Measurements on table. Has not moulted tail-feathers and those of back since last summer. Feathers of those parts much worn and bleached.

No. 652 Lepus sylvaticus arizonae ♀ad. Shot in the fallen trunk of large cottonwood-tree, resting on its stump, about 10 feet above the ground. I can hardly see how the rabbit could climb so high up. She had sought out a safe place wherein to have her young. The mammae were filled with milk, and four foetuses whose envelopes were as large as song sparrow's eggs were in utero. Skull only preserved. Weight $1\frac{13}{16}$ lbs., Aver. Total length, 405. Head & body, measured to os ischium 353. Tail, vert., 59; hairs, 83; width 57. Ears, height above crown, 77; height from notch, 62; width (measured on section across widest part), 49. Longest whiskers, 67; Distance between eyes, 33; Chest girth, 180; Tip of bill to front teeth (this measurement is useless, as is the measurement from tip of bill to angle of mouth, because of its uncertainty), 5; eye, 36, Centre of pupil, 42; angle of mouth, 19; ear, 66; tip of ear, 140; occiput, 71; end of hind leg, 540

Fore limb from coracoid, 147; olecranon, 107; manus, 45 longest claw of manus, 65. Hind limb, 226; Knee, 172 pes, 87; longest claw of pes, 7. Measurements of hands and feet are to end of longest claw, not of hallux, which extend considerably beyond.

March 27th, 1888. Ft. Verde, A. T.

Harporhynchus crissalis. - Found a nest containing 2 eggs, with shells cracked. They would hatch within a few hours. The parent was seen sitting upon the nest, I never remember to have caught sight of an old one on the nest before, as they are remarkably shy.

Mimus polyglottus. - Now quite common.

6137 Corvus corax sinuatus ♀ ad. Measurements on Table. It was wounded and bit viciously. It caught hold of the bridle and clung to it most tenaciously. Photo. There were three (3) together.

Carpodacus frontalis. - A nest that was built in an old nest of Petrochelidon lunifrons, fell down upon our piazza to-day. It contained two fresh eggs, the first of which was probably laid yesterday (March 26th). I think this is the earliest breeding record, although it is probable that they may sometimes breed even during the winter months. They certainly do so in the lower parts of Arizona.

Tachycineta thalassina. - First seen. Several.

March 28, 1888. Ft. Verde, Arizona.

6138 Sturnella magna neglecta. ♂ ad. Measurements on Table.
6139 Pipilo aberti. ♀ ad. do
6140 Pipilo maculatus megalonyx ♂ ad. do
6141 Sayornis saya. ♂ ad. do
6142 Salpidoptenyx seirpenurus ♂ ad. do
6143 Thryothorus bewickii bairdi. ♂ ad. do
6144 Spizella socialis arizonae ♂ ad. Sexpositive do Head striped.

March 31, 1888. Ft. Verde, Arizona.

Petrochelidon lunifrons. - A few visited the nests under our porch early in the morning and then disappeared. They were the first seen.

6145 Dimphuspiza bilineata. ♂ ad. Measurements on Table.

April 2nd, 1888. Ft. Verde, Arizona.

Oroscoptes montanus. - The regular migration has commenced. There have been a few in the valley all winter.

Vireo pusillus. First seen; several; singing.

Cathartes aura. First seen; one.

Helminthophila luciae. First seen; two taken; singing in the cottonwoods that are now green, although the young leaves have just unfolded in the past week, some being more advanced than others. Now in fruitage.

Geothlypis trichas accidentalis. - First seen; one ♂.

Progne subis. - First seen; one female.

Junco oreganus. - Common in Cottonwoods, Warblers, clinging to branches & tree-trunks, where they act like. The Verde is very high. No water birds except Killdeer. Camanche plumes, 4 sp. legumes, evening primroses willows, box-elders, ash, hyacinths, golden poppies, little pink flowers, cruciferae (several sp.) and umbelliferae now flowering plentifully. Warm; wind South.

Harporhynchus crissalis. - Two nests found. One in mesquite, contained 2 good-sized young - half grown. The other nest was built in a clematis-vine, that grew luxuriantly over some dead desert willows. It was well concealed, being suspended 5 feet from the ground. It contained two eggs, from which I removed embryos with some difficulty.

Thus far this year, I have taken three sets, all complete of 2, 3 & 2, respectively. Three other nests were found containing young or eggs just ready to hatch, and in each case the set was two eggs.

Pipilo aberti. - A nest found in "Asparagus Cemetery" just finished, but without eggs.

Sayornis saya. - Nest at Hospital contains 2 eggs.

(April 2nd — Concluded.)

6146 Vireo pusillus. ♂ ad. Measurements entered on Table
6147 Helminthophila luciae ♂ ad. do
6148 Carpodacus frontalis ♀ ad. do
6149 Spizella socialis arizonae. ♂ ad. do
6150 " " " . ♀ (ad?) do
6151 Poocaetes gramineus confinis. ♂ ad. do
6152 Oroscoptes montanus. ♀ ad. ~~♀ ad~~ do
6153 " " . ♂ ad. do
6154 Salpinctes obsoletus. ♂ ad. do
6155 Pipilo fuscus mesoleucus. ♂ ad. do
6156 Mimus polyglottus. ♂ ad. do
6157 Junco ~~oregonus~~ (h. shufeldti?) ♀ ad. J. h. shufeldti do

April 3, 1888. Ft. Verde, A. T.

Sayornis saya. - 3 eggs in nest at Hospital, the birds seldom visit it during the heat of the day.
Petrochelidon lunifrons. - Squeaking about the old nest again this a.m.

April 2nd, 1888.

Received a box of Birds, shot at Payson, Arizona, by Mr. Joseph H. Gibson.

6158 Spizella socialis arizonae. ♂ ad. Payson, A. T. Crown flam. Measurements on Table.
6159 " " " ♂ ad. do Payson A.T. do
6160 Regulus calendula. ad. Crown ruby. " do
6161 " " ad. do " do
6162 " " ad. do " do
6163 Junco (~~oregonus~~?) ♀ ad. J. h. shufeldti " do
6164 " " ♀ ad. do " do
6165 Parus wollweberi " do
6166 Peucaea ruficeps boucardi. ♀ ad. " do
6167 Aphelocoma sieberi arizonae ♂ ad. " do
6168 " " " ♂ ad. " do
6169 " " " ♂ ad. " do
6170 " " " ♀ ad. " do
6171 " " " ♀ ad. " do
6172 Pipilo fuscus mesoleucus. ♂ ad. " do
6173 Sayornis saya. ♂ ad " do

6174 Aegialitis vociferus ♂ ad. Measurements on Table
6175 " " ♀ ad. do
6176 Pipilo maculatus megalonyx ♂ ad. do
6177 " " " ♀ ad. (Chin almost ♂.) do
6178 Colaptes cafer. ♂ ad. do
6179 " " ♂ ad. do
6180 Helminthophila luciae. ♂ ad. Fort Verde, Arizona. do. The last specimen was shot at Verde, April 2nd.

April 4th, 1888. Ft. Verde, Arizona

The leaves on the cottonwoods are now so dense that warblers are hard to see.
Dendroica aestiva _____ . One ♂ shot; first seen.
6181 Regulus calendula ♂ ad. Ruby Crown. Measurements on Table. This species now very numerous.
Carpodacus frontalis. - Nest in cottonwood contained one egg. Built in a mass of dead branches with the leaves dried on, hanging down alongside trunk.
Accipiter cooperi. - Old Uncle Tom, who lives on the sluice where the Hawk's nest was last year, told me they came and inspected the nest they built first, and abandoned afterwards, last season. This was towards the end of March. Then they decided on the other nest, a few hundred yards down the sluice, where they reared a brood last summer, one of which (No.) I preserved in first plumage, just from nest.
6182 Nycticorax nycticorax naevius. ♂ ad. Measurements on Table. Very fat. Weight 2¼ lbs. avoir. It sat hidden in the cottonwood foliage. Irides red. Legs + feet pale yellow. Bill covered with a glaucous bloom.
6183 Turdus mualaschkae. ♂ ad Measurements on Table.
6184 Dendroica aestiva. ♂ ad. do
6185 Dendroica auduboni. ♂ ad. do
6186 Junco ~~oregonus~~ h. shufeldti. ♀ ad. do
6187 Helminthophila luciae ♂ ad. Not skinned. do
6188 Regulus calendula ♂ ad. Crown ruby do
6189 " " ♀ ad. No ruby crown do
6190 " " ♂ ad. Crown ruby do

(April 4, 1888 – Concluded)

6191 Regulus calendula. ♂ ad. Crown ruby. Measurements on Table.
6192 " " ♂ ad. do do

April 8th, 1888. Ft. Verde, Arizona.

Sayornis saya. – Nest taken with 5 eggs. The first egg was laid April 1st, and one each succeeding day until there were five.
Tyrannus vociferans. – First seen; 2 together.

April 9th, 1888. Ft. Verde, Arizona.

Pipilo alberti. – A nest was found in the asparagus composite, containing young several days old.
Chelidon erythrogaster. – First seen; one (♂?)
Pipilo alberti. – The first nest was found, ready for eggs April 2nd. It contained 2 eggs April 4th.
Tyrannus vociferans. – Several couples seen.
Icterus cucullatus nelsoni. – Two males the first seen were at the Post Garden April 7th.

April 11, 1888. Port Verde, Arizona.

Robins and Juncos still abundant.
Dendroica æstiva. – Exceedingly abundant; but only one female seen.
The Cottonwoods are now in full leaf; and the shade is so dense that it is difficult to see small birds. Verde River still booming.
Icterus cucullatus nelsoni. – Common, but no females seen.
Zenaidura macroura and Carpodacus frontalis breeding.
Tyrannus cassini. – First seen.
Spizella socialis arizonæ. – Exceedingly abundant and ~~to~~ inhabiting the dense cottonwood foliage, where they sit exact like Fly catchers.
Geothlypis trichas occidentalis. – Now abundant.
Empidonax pusillus. First seen; one.
6193 Calliope calliope gambeli. ♀ ad. Measurements on Table. Has already oviposited in part her clutch of eggs.
6194 Zenaidura macroura ♀ ad. Measurements on Table.
6195 " " ♂ ad. do
6196 " " ♂ ad. do
6197 Zenaidura macroura ♂ ad. Measurements on Table.
6198 " " ♀ ad. do
6199 " " ♂ ad. do
6200 Bubo virg. subarcticus. ♂ ad. (Stomach contained part of Mouse and Wood Rat) do.
None of the above were skinned.
6201 Dendroica æstiva sonorana ♂ ad. Measurements on Table
6202 " " " ♂ ad. do
6203 " " " ♂ ad. do
6204 Dendroica auduboni ♂ ad (Not skinned) do
6205 Geothlypis trichas occidentalis ♀ ad do
6206 Spizella socialis arizonæ. ♂ (ad?) head streaked. do
6207 Pyrocephalus rubineus mexicanus. ♂ ad. do
6208 Picus villosus harrisi. ♂ ad. do
6209 Mimus polyglottus. ♂ ad. do
6210 Turdus migratorius propinquus ♂ ad. do
6211 Icterus cucullatus nelsoni ♂ ad. do
6212 Junco h. aikeni ~~hyemalis~~ ♀ ad. do

April 12th, 1888, Ft. Verde, Arizona.

Spinus pinus. – Flocks still remain in the cottonwoods. The males sing sweetly. A small flock singing in the trees about the Post Hospital this morning.
Icterus bullocki. – First seen; one in the Post.

April 13, 1888. Ft. Verde, Arizona.

6213 Merganser americanus. ♀ ad. Measurements on Table.
6214 Helminthophila luciæ ♂ ad. do.
6215 " " ♂ ad. do
6216 " " ♀ ad do
6218 Amphispiza bilineata ad. do
6219 " " ad do
6220 Salpinctes obsoletus. ♂ ad. do
6221 Regulus calendula ♀ ad. (No ruby crown) do
6217 Pipilo alberti ♂ ad. do
6222 Dendroica æstiva ♂ ad. do
The female (No. 6218) Amphispiza bilineata contained an egg nearly ready for extrusion.

April 15th, 1888. Ft. Verde, Arizona.

653 Lepus texianus ♀ ad. Total length, 670; Head + body to os ischium, 553; Tail vert., 120 Hairs, 160; width, 80; Ears above crown, 177; above notch, 143; width (cut off + outspread), 95; Longest whiskers, 85; Chest girth, 300; Distance between eyes, 48; Tip of nose to front teeth 12; angle mouth, 29; eye, 62; centre pupil, 70; Ears, 106; tip of ears, 290; occiput 112; end of hind leg 865; Fore limb coracoid, 275; olecranon 192; manus (to end claws), 75; hairs extend 4 mm beyond claws. Longest claw manus, 8.5; Hind limb, 380; Knee, 270; Pes (to end claws), 150; hairs extend 7 mm beyond claws. Claws, 12. Weight 7 lbs. Avoir. Diameter of eye, 17; Distance between extended fore + hind limbs, 970.

6223 Spizella socialis arizonae ♂ ad. Measurements on Table.

6224 Myiarchus ~~mexicanus~~ cinerascens Lawr. ♂ ad. do

Sides hazel. Bill brownish-black. Legs & feet + claws, blk. Mrs. Campbell's ranch, Beaver Cr., A.T. 15 miles n.e. of Ft. Verde. It utters a loud, startling note.

Nyctiniga antiteracina. — A pair at Campbell's ranch, where they were last year. I got a wing shot at one but missed it, having had to fire through dense foliage in the creek bottom. After that they circled high up in the air, sometimes like red-tails, utering loud cries. First seen, but have heard them

Falco mexicanus, — One at Montezuma's Well.

Cypseloides americanus. — A good sized flock in the Well, where I wounded a male + brought him home alive. During the day, whenever we crossed a stream he made frantic efforts to escape.

The sides of Montezuma's well were well sown with Swallows eggs.

Trochilus alexandri. First seen; common.

Myiarchus (magister mex.?). First seen; one shot.

Notes on season (Apr. 15). — One little snow patch on Squaw Peak. San Francisco covered with snow. Thermometer 90 to day; 88 yesterday. Sycamores leaving out, Beaver near Post, but not yet in leaf 10 miles up the creek.

Cottonwoods shedding cotton freely + leaves full sized. Boxelder foliage not fully grown, but large enough to make shade. Willows all in leaf. Ash partially leaved. The whole country is green + covered with flowers.

April 17, 1888.

Ardea herodias. — An egg was found on a cliff on Clear Creek. It is green, perfectly fresh, and measures 46 × 64 m m. Shell hard + thick.

Pipilo aberti. Six nests found; all in "asparagus" composite. Two contained young a few days old. Two contained 4 eggs nearly fresh, one 3 + another 2 eggs containing such large embryos that they could not be extracted

Empidonax obscurus — first seen.

April 23rd, 1888. Ft. Verde, Arizona.

654 Hesperomys Peromyscus eremicus anthonyi ♀ ad. Total length, 195 Head + body, 97 Tail vert., 95; hairs, 99 Ears, above crown, 18; notch, 22; width, 17 Bet. eyes, 9 Chest girth, 70. Longest whiskers, 45. Tip of nose to front teeth 5 angle mouth, 12; eye, 14; centre of pupil, 16; ear, 23 meatus, 23; tip of ear, 46; occiput, 31; end hind leg, 143 Diameter eye, Fore limb from coracoid, 34; olecranon 25 manus, 12.5; width of manus, 37; longest cl. of manus 2.2 Hind limb, 59; Knee, 44; pes, 21; width 4. cl. 2.2. Weight

655 Lepus syl. arizonae, ♀ ad. Measurements on a Table.

656 " " ♀ ad. do

Zenaidura macroura. 2 sets of 2 eggs each taken.

Sayornis nigricans. Nest + 4 eggs at the Post Spring.

April 17th, 1888. Ft. Verde, Arizona.

6225	Polioptila caerulea.	♀ad	measurements on Table.
6226	Dendroica aestiva sonorana	♀ad.	do
6227	" " "	♀ad.	do
6228	Anthus pensilvanicus	♀ad.	do
6229	Melospiza lincolni.	♂ad.	do
6230	" "	♀ad.	do
6231	Geothlypis trichas occidentalis.	♂ad.	do
6232	Spizella sociabilis arizonae.	♀ad.	do
6233	Zonotrichia intermedia.	♂ad.	do
6234	" "	♂ad.	do
6235	Larus delawarensis alleni.	♀ad.	do
6236	Ardea herodias.	♂ad.	(Parent of egg taken) do
6237	Melospiza lincolni.	♀ad.	do
6238	" "	♀ad.	do
6239	Pipilo aberti.	♀ad.	do
6240	" "	♂ad.	do
6241	Tyrannus verticalis	♂ad.	do
6242	" "	♀ad.	do
6243	" "	♂ad.	do
6244	Empidonax obscurus.	♂ad.	do
6245	Empidonax pusillus.	♂ad.	do
6246	Myiarchus ascensis.	♂ad.	do
6247	Spinus psaltria	♂ad.	do
6248	Dendroica auduboni	♂ad.	do

Notes:-

Anthus pensilvanicus. - Only three seen; scarce now.

Pandion carolinensis. - Now abundant.

Melospiza lincolni, is still very abundant in the "asparagus" composite along the Verde.

Larus delawarensis alleni. - Two adults together sitting on a sand flat at the ford. I shot both at once, but one recovered and flew off.

Actitis macularius. - None have been seen this spring.

Ardea herodias. - Nest found on a cliff of rocks on Clear Creek. Parent (No. 6236) shot & one egg taken from nest. Described on previous page (19)

April 23, 1888. Ft. Verde, Arizona.

6249	Mimus polyglottus.	♂ad.	Measurements on Table.
6250	" "	♂ad.	do
6251	Icteria virens longicauda.	♂ad.	do
6252	Melospiza lincolni.	♂ad.	do
6253	Icterus cucullatus nelsoni.	♀ad.	do
6254	Chondestes grammacus strigatus.	♂ad.	do
6255	" " "	♂ad.	do
6256	" " "	♀ad.	do

Note.

Accipiter americanus. - First seen April 18th; two.

April 25th, 1888. Ft. Verde, Ariz.

6257	Zenaidura macroura.	♂ad.	Measurements on Table.
6258	" "	♂ad.	do
6259	" "	♂ad.	do
6260	" "	♂ad.	do
6261	" "	♂ad.	do
6262	" "	♀ad.	do
6263	" "	♀ad.	do
6264	" "	♂ad.	do
No. 657	Spermophilus grammurus.	♂ad.	do
No. 658	Tamias harrisi.	♂ad.	do
6265	Actitis macularia.	♀ad.	do
6266	Geothlypis trichas occidentalis.	♂ad.	do
6267	Dendroica aestiva sonorana.	♀ad.	do
6268	Spinus psaltria.	♂ad.	do
6269	Empidonax. obscurus	♀ad.	No measurements taken.
6270	Empidonax "	♂ad.	Measurements on Table.
6271	Icterus cucullatus nelsoni.	♂ad.	do
6272	Carpodacus frontalis.	♀ad.	do
6273	Mimus polyglottus.	♂ad.	do
6274	Pyrocephalus rubinus mexicanus	♂ immature	do
6275	Melospiza fasciata fallax.	♀ad.	(Parturient) do

6276 Mimus polyglottus. ♂ad. Measurements on Table.
6277 " " ♂ad. do
6278 Deleus cucullatus nelsoni ♂ad. do
6279 Helgidopteryx serripennis. ♂ad. do
6280 Empidonax obscurus. ♂ad. do
6281 Amphispiza bilineata. ♂ad. do
Micropus melanoleucus. – First seen; a number.

April 28th, 1888, Ft. Verde, Arizona.

6282 Melanerpes torquatus. ♀ad. Measurements on Table.
6283 Calamospiza melanocorys. ♂ad. do
No.659 Tamias lateralis ♀ad. Trapped in Major Otey's house.

April 29th, 1888, Ft. Verde, Arizona.

6284 Podilymbus podiceps. ♂ad. Measurements and descrip=
=tion of soft parts on (two) tables.
Killed by some men who were blasting fishes in Beaver Creek, using cartridges of giant powder. The bird has had a humerus fractured, but the repair is very perfect and has but little redundancy of callus. This is the lowest American bird in its organization, approching the reptilia in certain matters respecting its habits, anatomy, etc., and the structure of its bones and their manner of healing constitutes a further resemblance.

April 30th, 1888. Ft. Verde, Ariz.

6285 Petitis macularia ♀ad. Measurements on Table. ~~First seen~~
6286 Tringa minutilla. ♂ad. do First seen.
6287 Molothrus ater obscurus ♀ad. do First seen

May 1, 1888. Ft. Verde, Arizona.

6288 Symphemia semipalmata. ♂ad. Measurements on Table.
6289 " " ♂ad. do
6290 " " ♂ad. do
6291 " " ♂ad. do
6292 " " ♂ad. do
6293 " " ♀ad. do
6294 " " ♂ad. do

6295 Symphemia semipalmata ♀ad. Measurements on Table.
6296 " " ♀ad. do
6297 " " ♀ad. do
6298 " " ♂ad. do
6299 " " ♂ad. do
6300 Tringa minutilla ♂ad. do
6301 Tetanus bulloeki. ♂ad. do
Ceryle alcyon. – One seen to-day.
Anthus pensilvanicus. – None have been seen since April 17, when a specimen was taken and several seen.
No.660 Neotoma mexicana ♀ad. My dining-room closet.
No.661 " " juv. Progeny of above.

May 3rd, 1888, Ft. Verde, Arizona.

Vireo gilvus swainsoni. – First seen; one.
Myiodioctes pusillus pileolatus. – Common.
Setoria virens longicauda. – Now very abundant.
Zonotrichia intermedia. – Abundant.
Zonotrichia leucophrys. – Exceedingly abundant, in the shade of the cottonwoods beside streams. Gregarious. This species is a spring and fall migrant — not a winter resident.
Ammodramus tristis. – A flock in full plumage singing loudly in the cottonwoods and willows beside the sluice. One adult male taken.
Nycticorax nycticorax naevius. – One started from a dense tangle of low trees and grapevines (now covered with fragrant bloom) beside the Verde. It alighted in a dense alder tree, and allowed me to ride underneath without moving. I looked up through the branches and saw it, but was too close to shoot it without moving farther away. I dismounted and returned but could not see it again, and finally missed a wing shot through the branches.
Colaptes cafer. – Nest found in a cottonwood but I was not energetic enough to climb to it. Otto McRoth took an egg April 29th, 1888, measuring x

(May 3rd — Continued.)

Accipiter cooperi. — Found a nest of the pair whose nest I found on the Sluice last year (See notes infra). The male sat motionless on an adjoining cottonwood, and flew away when I began climbing to the nest, which was placed in a treble fork of a cottonwood, 30 feet from the ground. The female came and cried loudly dashing past me within a few feet. Both parents were in full adult plumage. There was one egg in the nest, covered loosely with strips of cottonwood bark. This is the first time I have known this Hawk to cover its eggs.

Tringa bairdi. — Flock of 6. First seen; all taken.

Mimula migratoria propinqua. — Nearly all have departed. I saw a single one to-day.

Ceryle alcyon. — One ♀ seen on the Verde River.

Hirundo pensilvanicus. — All have departed. None seen since April 17th.

Lanius ludovicianus excubitorides. — One that was building near Davis's house, was seen by Mrs. John Davis to fly into a flock of Gambel's Quails and alight on one's back, and pluck out a beakful of feathers and then fly with them to her nest!!

Dendroica auduboni. — Still common; females more abundant.

Troglodytes aëdon. — One seen; first seen!

Melospiza lincolni. — Now getting very scarce. A fortnight ago it was extremely plentiful.

6302	~~Tringa bairdi~~ Erymnites occidentalis	♀ ad	Measurements on Table.	
6303	Erymnites occidentalis	♀ ad.	do	Irides dark hazel
6304	" "	♀ ad.	do	Bill black
6305	" "	♀ ad.	do	Legs & feet grayish black. Claws, black.
6306	" "	♂ ad.	do	
6307	" "	♂ ad.	do	
6308	Hotili's macularia	♂ ad.	do	
6309	" "	♀ ad. (Not skinned.)	do	

6310	Anas cyanoptera.	♂ ad.	Measurements on Table.
6311	Astragalinus tristis	♂ ad.	do
	Bill brownish-yellow at base, shading to dusky olive at tip: Legs and feet light yellow; claws brown. Irides hazel.		
6312	Hirundo erythrogastra	♂ ad.	Measurements on Table.
6313	Myiodioctes pusillus pileolatus	♀ ad.	do
6314	Amphispiza bilineata	♂ ad. }	Mated pair. do
6315	" "	♀ ad. }	do
6316	Peteria virens longicauda	♂ ad.	do
6317	" " "	♂ ad.	do
6318	Vireo gilvus swainsoni.	♀ ad.	do
6319	Zonotrichia leucophrys	♂ ad.	do
6320	" "	♂ ad.	do
6321	" "	♂ ad.	do
6322	" "	♂ ad.	do

Piranga ludoviciana. — First seen; one ♂.

Chordeiles acutipennis. — First seen; several.

Tolanus solitarius. — First seen; one.

May 5th 1888. Fort Verde, Arizona.

6323	Actitis macularia.	♀ ad.	Measurements on Table.
6324	" "	♂ ad.	do
6325	" "	♀ ad.	do
6326	Geothlypis trichas occidentalis	♂ ad.	do
6327	" " "	♀ ad.	do
6328	Mimus polyglottus.	♀ ad.	do
† 6329	Melanerpes torquatus	♀ ad.	do
6330	Buteo swainsoni.	♀ ad. (Had deposited one egg.)	do Stomach contained frog.
6331	Nycticorax nycticorax naevius.	♀ ad. (Had oviposited in past two weeks of 1888.)	do
~~6332~~			
~~6333~~			

May 6th 1888. Fort Verde, Arizona.

6332	Piranga rubra cooperi.	♂ ad	Measurements on Table.
	Verde River at Frank Jordan's ranch. Irides hazel. Bill olive, darker above. Legs, feet and claws, olive-gray. Its note ~~was~~ was spasmodic and resembled a Fly catcher's		
6333	~~Selasphorus Calliope~~ Trochilus alexandri	♂ ad.	"Poker" Johnston's mine at the base of Squaw Peak. Verde Valley, A. T. Measurements on Table.
6334	~~Selasphorus Calliope~~ Trochilus alexandri.	♂ ad.	do

6335 Pocecetes gramineus confinis. ♂ad. Mesa East of Sycamore Creek, Agua Fria Basin, A. T. Measurements on Table.

May 7th, 1888. Sycamore Creek to Bloody Basin

6336 Cardinalis cardinalis superbus ♀ad. Measurements on Table. Blood Basin, A. T.

May 8th, 1888. Bloody Basin to Squaw Creek.

6337 Corvus corax ♂ad. Measurements on Table Bloody Basin, A. T.

6338 Pterus cucullatus nelsoni. ♂ad. Measurements on Table. Nest in same tree with a Red-Tailed Hawk's nest.

6339 Buteo borealis calurus ♀ad. Measurements on Table. Parent of set of 2 eggs. Squaw Creek. The nest was placed in the top of a sycamore-tree, 40 feet from the ground. Shot as she flew from the nest, which she did not quit until a shot was fired into the tree. The male bird sat on an oak bush on a hill, a quarter of a mile away and did not move until I went after him with a rifle. Then he flew away out of sight. We camped near the spot, and on the following morning found the male bird sitting beside the nest; but he was too shy to be shot. The female's gizzard contained a small Striped Snake.

May 9th, 1888. Squaw Creek to Fort Verde, A. T.

6340 Cardinalis cardinalis superbus ♂ad. Measurements on Table. Indian Creek. There were a pair courting in a cedar-tree quite a little distance from water.

6341 Piranga rubra cooperi ♀ad. Measurements on Table Sycamore Creek, A. T. There was a mated pair, but I was unable to catch the male on our brief halt, having chosen the female for the first shot. This pair was in the same spot on May 7th, when we camped just below on the Creek.

6342 Dendroica nigrescens ♂ad. Measurements on Table

6343 " " ♂ad. do No. 6343 has some white in black throat patch. Shot in evergreen oak-tree, at Harner's Ranch

6344 Helminthophila celata lutescens ♂ad. Measurements on Table Shot in evergreen oak-tree at Harner's Ranch.

6345 Melanerpes formicivorus bairdi ♂ad. Measurements on Table Shot in oak-tree at Harner's Ranch, where it breeds.

6346 Pipilo fuscus mesoleucus ♀ad. Measurements on Table. Tule Spring, Agua Fria Basin, A. T.

6347 Habia melanocephala ♂ad. Measurements on Table Squaw Peak, Verde Valley, A. T.

Note. - On May 6th I started with a packer and soldier for Bloody Basin, A. T., 50 miles southwest of Ft. Verde, for the purpose of packing Mr. George Hance, a wounded man, out of the basin to his wagon, distant 13 miles, on our newly devised mule litter. We took 2 pack mules.

May 6th. - Passed through Government Gap, south of Squaw Peak, thence over the ridge of the Black range of mountains by way of Sergt. Harner's ranch to Sycamore Creek, on which stream we camped. Amphispiza bilineata. - First young on the wing.

May 7th. - Marched to Murray's Cattle Camp in Bloody Basin, where we arrived at 2 o'clock P.M., too late to start out until next day.

May 8th. Packed Hance 13 miles, over an exceedingly rough trail to his wagon on Copper Creek, which we reached at 3. P.M. We then left him with his friends and marched to Squaw Creek, where we camped.

May 9th. Rode to Ft. Verde, by way of Indian and Sycamore Creeks and Harner's Ranch and Gov't Gap.

On this trip the following eggs were taken:

Accipiter cooperi. Set of 3 eggs (one quite heavily marked) from a nest in a alder-tree on Sycamore Creek, May 7th. The nest was 50 feet from the ground. The parents flew about uttering their usual cry of ca-ca-ca-ca-ca.

Nest and 3 (-2 broken) eggs from cedar tree on mesa north of Squaw Creek, May 7, 1888. The old bird looked like a mocking-bird and the nest resembled its closely. The eggs, however were quite different. They were all three alike. Two were crushed.

Buteo borealis calurus. Set of 2 eggs with ♀ parent from sycamore tree 40 feet high, on Squaw Creek, May 8, 1888.

Callipepla gambeli. - Set of 11 eggs from beneath a huge spreading prickly pear plant (Platopuntia) where it was well hidden & better protected as my hands bear testimony. Copper Creek, Ariz. May 8, 1888.

May 10th, 1888. Ft. Verde to Cienega & back.

To-day rode the Hance's Cienega and back to the Post, a distance of 22 miles

6348 Chordeiles gramnacca strigula ♀ ad } Copper Cañon. Meas. on Table.
6349 " " " ♂ ad. } Pair do do
6350 Spizella socialis arizonae. ♀ ad. Head of do do
6351 Peterus cucullatus nelsoni ♀ ad. do do
6352 Contopus richardsoni ♂ ad. Cienega. do
6353 Melanerpes formicivorus bairdi ♀ ad. " do
This species breeds at the Cienega and at Harner's Ranch on the return.
6354 Aphelocoma woodhousei ♂ ad. Copper Cañon. do
6355 Carpodacus cassini. ♀ ad. Nearly at the head of do do.

Contopus richardsoni. - First seen; one.
Chordeiles accutipennis. - Now common. I think they first appeared about May 1st.
Habia melanocephala. - Singing sweetly at sunset.
Xanthocephalus xanthocephalus. - One ♀ in the Post.

May 12th, 1888. Ft. Verde, Arizona

Myiarchus cinerascens. - Took set of 5 eggs from false chimney (wooden) on out building in my back yard where they nestle each year.

May 11th, 1888, Ft. Verde, Arizona.

6356 Nycticorax nycticorax naevius ♀ ad. Measurements on Table
6357 Pyrocephalus rubineus mexicanus. ♂ ad. do
6358 " " " ♂ ad. do
6359 " " " ♀ ad. do
Piranga rubra cooperi. - I saw a pair (♂ and ♀) together on the sluice, but could not shoot them.
Lonchorhynchus leucophrys. - Still very abundant.
Habia melanocephala. - A pair beside the Verde River.
Nycticorax nycticorax naevius. - The specimen shot (no. 6356) was emaciated, weighing but 24 oz., Avoir. Its body was filled with parasites similar to those found in some of the Anatidae of this region. I have sent its body, along with an diseased Spatula clypeata, to the Army Medical Museum, at Washington.
The Indians will not eat the Ducks & Geese. The Moquis, who represent the most ancient people now living in this region, assert that a long time ago their people ate Ducks, and, in consequence were afflicted with a disease that spread among them and destroyed a great many lives. Sets of Accipiter cooperi (3 eggs) and Procnulus alexandri taken on the sluice

May 13th, 1888. Ft. Verde, Arizona.

6360 Symphemia semipalmata ♀ ad. Measurements on Table.
(to Cherry Creek, & back.

May 14th, 1888. Fort Verde, Arizona

No. 662 Spermophilus grammurus. ♂ ad. Measurements on Table.
Cherry Creek, Arizona.
6361 Peterus parisorum ♂ ad. Measurements on Table.
6362 " " ♀ ad. do
Lower foot-hills, on Cherry Creek Road.

From Cherry Creek: -
6363 Dendroica nigrescens ♀ ad (no black on throat). Measurements on Table
6364 Empidonax obscurus ♂ ad. Measurements on Table
6365 Habia melanocephala ♂ ad. do
6366 Vireo vicinior. ♂ ad. do
6367 Vireo gilvus swainsoni ♀ ad. do

May 14th — Continued.

6368 Thryomanes bewickii bardi ♂ad. Measurements on Table.

May 15th 1888. Ft. Verde, Arizona.

6369 Buteo swainsoni ♀ad. Measurements on Table. Was building a nest in a large cottonwood beside the Verde River. Its stomach was filled with large lizards. Tail only preserved.

6370 Alcedo alpestris adusta identified by Dwight. ♂ad. Measurements on Table.

No. 663 Tiber zibethicus. ♂ad May 15, 1888. Verde River, near Ft. Verde, Arizona. Measurements on Table.

Notes. — The following birds were observed in Cherry Creek, on May 14th, 1888.

Petrea virens longicauda. — Following the creek, up to pine timber.

Habia melanocephala. — Very abundant.

Spizella atrigularis. — Several observed on the brushy foothills this side of Cherry Creek.

Thryomanes bewickii leucogaster. — Very abundant from the higher foothills to the oak and Pine timber in upper Cherry Creek. The male mounts to the topmost bough of a tall tree to sing his little trilling song, which is more like a sparrow's than wren's. In the underbrush and amongst the dead timber where it builds its nest it utters a peculiar rattle. Vireo gilvus swainsoni and V. vicinior were plentiful amongst the mingled pine and oak timber. The latter has a striking song; the former a sweet one too.

Icterus parisorum. — Common from the lower foothills to the pine timber. A nest was taken with its complement of four eggs. It was suspended in a dense cluster of mistletoe attached to a tall oak bush in a thicket close to the roadside. The male was bold in defense of it; but the female was so shy that I could not obtain her until I returned and then with difficulty. Their call note of alarm resembles that of the Orchard Oriole, being something like a blackbird's.

Poaltriparus plumbeus. — In flocks; common.

Parus wollweberi. — Abundant; breeding.

Merganser americanus. — Saw a flock of twelve (12) flying up the Verde River early in the morning.

Spiza amœna. — One the first seen at foothills on way to Cherry Cr.

May 17th 1888. Ft. Verde, Arizona.

Rode along Beaver Creek 10 miles (to Schroeder's Ranch) from its mouth and back to the Post.

Urubitinga anthracina. — Was not seen at all. Last year I shot a parent and took 2 eggs from a nest in a sycamore-tree on this part of the creek.

Spinus psaltria. — Very abundant. Its sad notes heard everywhere. A female gathering down from the catkins of the willow for her nest.

Helminthophila luciæ. — Nesting.

Progne subis. — A number seen below Schroeder's on Beaver Creek. I do not think they breed there, although the Violet-green Swallows (Tachycineta thalassina) is building there in numbers.

Ardea virescens. — First seen; many observed. Indeed they were almost gregarious, three being flushed from one tree. The only other water birds seen were Actitis macularia, Ægialitis vociferus, Ardea herodias and one Coot (Fulica americana). Not a single duck!

Phainopepla nitens. — Very abundant; both sexes. The first seen here this season. On May 8th I saw a number in Bloody Basin, 50 miles south. It wintered on Tonto Creek, Tonto Basin last winter. I heard a male sing sweetly. Their call is sweet, like a Robin's note softly uttered.

Zenaidura macroura. — Took a young bird, just from the nest. The first seen.

Lepus sylvaticus arizonæ. — Young half-grown. I saw one very young at Hance's Cienega May 10th.

(May 17th — Concluded.)

Myiodioctes pusillus pusillus. — Very abundant.

Cyanocitta caerulea. — One adult male at Schroeder's Ranch. The first seen.

Habia melanocephala. — Several seen. Singing.

Pranga ludoviciana. — Very abundant.

Contopus borealis. — First seen; one at Schroeder's

Contopus richardsoni. — Very common.

Micropus melanoleucus. — Not seen; only noted once this spring — April 25th.

6371 Helminthophila luciae ♀ ad. Measurements on Table.

6372 Cyanocitta caerulea ♂ ad. do

6373 Progne subis ♂ ad. do

6374 Vireo gilvus swainsoni ♀ ad. do

6375 Icteria virens longicauda ♂ ad. do

6376 Zenaidura macroura ♂ juv. Just from nest; still being fed by parents.

6377 Turdus ustulatus ♂ ad. Measurements on Table. Iride hazel. Bill yellow at base mandible; residue brownish-black. Legs & feet fleshy-brown; claws brown.

6378 Fulica americana ♀ ad. Measurements on Table.

6379 Ardea virescens. ♂ ad. do

6380 " " ♂ ad. do

6381 " " ♂ ad. do.

No. 6379 has the legs yellow; no. 6380 orange; No. 6381 salmon-red. No. 6380 & 6381 have the face in front of eye intense blue. Bill black, except a yellow streak on lower side of mandible. Irides yellow. No. 6379 has the face mottled with greenish yellow instead of blue. No. 6381 has a remarkable conformation of bill. Stomachs all empty except No. 6381 which contained a lizard 17 inches long. Its tail extended up into the throat, the head & shoulders in the gizzard; our common long-tailed species.

Lophodytes cucullatus. — Nest & sitting, Cottonwood, at Schroeder's

Ardetta exilis. — Mr. Schröder says he frequently sees one or two at his Spring. I have only seen one in Arizona, and that was there, several years ago, about this time of year.

On April 19th, 1888, I rode 50 miles to Bloody Basin, to see Mr. George W. Hance, who was badly wounded by a cow's horn. I remained in the Basin on the 20th, and returned to Fort Verde on the 21st of April.

Canacus canurus. — Three were seen at Mr. Hutchinson's horse camp on the rim of Bloody Basin, in the oak and juniper timber, on April 19th. Mr. Hutchinson has shot several about his ranch there. Both species occur.

Meleagris gallopava. — There is a single female on the creek in the Basin. She has been there several years, the cattle men say, but they have never seen any others. On the mountain 12 miles to the north in pine timber at the head of Bishop Creek they are said to be abundant.

Vireo vicinior. — Several seen and heard in the oak-clad hillsides, where there were scattered cedars. They sang very loudly and spent most of the time in oak bushes. Seen April 19th & 21st.

Pipilo chlorurus. — Only one seen April 19th, but very abundant returning, on April 21st.

Trochilus costae was abundant in the Basin, on April 20th.

Icterus parisorum. — First seen April 19th. Several.

Pardinalis cardinalis superbus. — Common on the streams about the Basin. One pair came familiarly about the cabin and the male sang on the woodpile. Also seen on Indian and sycamore creeks, on the mesa between Hance's, Cienega & the Basin.

Pipilo fuscus mesoleucus. — A pair were building near the house in the Basin. They were very tame and familiar about the cabin.

Neotoma floridana mexicana. — One packed off some pill-boxes during the night. Hance woke me up and I rescued them with difficulty. They are very bold, although there was

a cat in the house.

Bassarus astuta. – One came to Hamer's Cabin Southwest of Squaw Peak and began at once perfectly gentle.

Procyon cinero-argentatus. – One at Hamer's ranch cleared the place of Rabbits in a very short time.

Mous americanus. – Hutchinson finds them occasionally about his ranch.

Ammodramus passerinus perpallidus. – On the high level mesa, between the mountain divide on the west bank of the Verde and the Agua Fria I saw a number of these pretty sparrows.

In Bloody Basin I was interested to find nests of Campylorhynchus brunnei=capillus built in large Platopuntia Cactus. One nest was also seen in the same species of cactus, between Sycamore and Indian Creeks. I saw none of the birds.

On a mountain slope in Bloody Basin, facing the ~~slope~~ south, I saw a number of Sahauras or Giant Cactuses (Cereus giganteus), but did not visit them.

On April 20th I shot a Jack Rabbit of the season, in Bloody Basin, that was as large as a Cotton-tail (L. syl. arizonæ.). Both species are abundant there.

The mesquite grows to the size of trees in the Basin. I chopped into two of them in search of the eggs of Myiarchus cinerascens and Helminthophila luciæ; but both nests were incomplete & without eggs. Ap. 20th.

The ranch on Grove Creek, where Hance lay sick has an elevation of about 3000 feet according to Powell's map.

A Box of eggs was brought me from Payson, May 8th 1888, which they were collected for me by Mr. Joseph Gibson.

Set 4 eggs of Aphelocoma sieberi arizonæ. – May, 1888. One egg was crushed, 3 preserved, one of which cracked.

1 Small roundish red-spotted egg, unblown (? Falco ?)

1 Mockingbird

19 Cliff Swallows.

2 Very small spotted eggs.

2 Small bluish, immaculate eggs.

3 Vireo ___ ?

Febr. 10th 1888. Copper Canon, near Verde.

604 Procyon cinero-argentatus. ♀ ad. Total length, 1180 Head & body, 630. Tail, to end vert., 470; hairs, 545; width, 190. Ears, height, 92; notch, 84; width, 80; diameter of eye, 15. Tip of nose to front teeth, 14; to angle of mouth, 68; eye, 59; centre of pupil, 69; ear, 123; meatus, 125; tip of ear, 225; occiput, 148; end hind leg, 950. Fore limb, 375; olecranon, 203; manus, 95; width, 30; claws: 1st (inner) 11.5; 2nd, 15; 3rd, 14; 4th, 14; 5th, 13.5. Hind limb, 365; Knee, 220; pes, 135; width, 28; claws: 1st (inner) 13; 2nd, 13; 3rd, 13; 4th, 13. Between eye, 30; Chest girth, 250. Longest whiskers, 97. Copper Canon, Febr. 10, 1888.

Fonto

May 18th 1888, Greek, Arizona

Erubitinga anthracina. – Set 2 eggs in cotton=wood tree, beside Creek, 35 feet from the ground. Measure 5-0 (or 60) X 62 and 58 X 60.

Date?

"Weights: Golden-eye 1 14/16 lbs. A. boschas 2 11½/16. Mallard 3 13½/16."

Glaucionetta clangula americana. – See description on page 831 No. 6016, Bad.

Birds seen between Fort Verde and Flagstaff Arizona, May 26th to 28th, 1888.

We took our final departure from Fort Verde, on May 26th. The Killdeers piped a shrill farewell as we crossed the Rio Verde, probably for the last time in our lives, after living on its banks for more than four years. As we drove along in an ambulance, behind four mules, we bade good bye to the Crissal Thrashers, Abert's Towhees, and a score of other common birds of the valley. In the timbered bottom, where we crossed Beaver Creek were Lazuli Finches, Blue Grosbeaks, Bullock's Orioles, Crimson-headed Tanagers, and Western Yellow Warblers, Chats and Yellow-throats. As we ascended the mesa, the Bay-winged Sparrows appeared; and the Black-throated Sparrows tarried until we got to the high mesa, where they were left behind where the cedar forest begins. Once up the steep slope of this mesa, among the cedars, we found only the Titmice, Gnatcatchers, Mockingbirds, Black-throated Gray Warblers, Rock Wrens, Woodhouse's Jays, Sparrow Hawks, the last Gambel's Quails, and a few other birds. The Harris's Chipmunks and Cotton-tail Rabbits did not reach this mesa: but there were a few Jack Rabbits and some large Line-tailed Spermophiles.

Towards Rattlesnake Tanks, we stopped the ambulance to look down into a wonderful cave, in the lime-rock, beneath a superficial layer of volcanic lava, at the floor of which we could see the horns & skeletons of some deer that had gotten into this pitfall. At Rattlesnake, we only stopped long enough to permit the mules to drink, as it was blowing up cold and we were not provided with wraps enough to keep us all warm. Here

we heard the last Quail calling; and mockingbirds were only found a little way (about 3 miles) further up the slope. There were some fine songsters among the Scott's Orioles; and Bonpard's Sparrows also essayed a song.

We soon passed through the more open country between Rattlesnake Tanks and the lower edge of the pine belt, where I called my Mother's attention to the spot where we camped, 2 years before, when I was bringing her into the country, at a place called Pine Tanks. We recalled the beautiful locust shrubs, at that time in full bloom.

Up to this point we had noticed with interest, as we ascended the mountain range that the same flowers that had bloomed long since and afterwards ripened their fruit away down in the hot valley of the Rio Verde, were, at some point of our ride, only now in flower, and afterwards reached an altitude where they were still in bud. We had left the red cedar behind and travelled through a sparse growth of fine rough-barked junipers to the edge of the pines, where deciduous oaks begin and into which the juniper penetrates several miles. The oaks first seen were just in full leaf. The next day we passed some, near Flagstaff that were just beginning to unfold their leaves.

We rode five (5) miles beyond Pine Tanks to Woods's ranch, where we overhauled our wagon team. They had pitched our Tents, and I soon had the beds made down for the ladies and children, as the wind was blowing up very raw. Then, while our cook was preparing our meal, I

took little Lillian with me, and hunted up some pretty plants and pressed them as a last souvenir of the beautiful pine forest of Arizona. We found a handsome yellow Collinsia that appeared to be new and some handsome legumes and palmate violets. Grace's Warbler (Dendroica graciae) was abundant and singing its pretty trilling song in almost every pine-top. I shot two fine males and a wee bit of a Pygmy Nuthatch (Sitta pygmaea).

May 27th, 1888. Woods' Ranch to Flagstaff.

Before breakfast, I collected a few more plants.

I shot a male Liver-colored Tanager (Piranga hepatica) and a fine Poor Will (Phalaenoptilus nuttallii), the latter upon her two eggs, which were almost unspotted, creamy white, measuring x + x mm. They were destroyed by having our mess-chest, in which they were packed, smashed in between there and Flagstaff. The nest (~~was~~ or eggs, as there was no nest) placed on the ground, between two stones, at the foot of a low cliff on a rocky hillside, beneath the pines. I found another nest containing young. We heard them calling at Flagstaff during the ensuing night. Hepatic Tanagers were common and singing a very fine song. Both Crows and Ravens were common about our Camp at Woods's. The Broad-tailed Hummer was found near Pine Springs and thence to Flagstaff. After making some photographs we started off our transportation wagon and left ourselves an hour later. At Munns's I said good bye to "Doc" Carrier and got some milk for our baby. The weather was

right cold, and the ladies bundled up warmly in blankets that we retained from our bedding rolls. It was, well we did; for we were soon in the midst of a snowstorm and the ground was soon covered and white. The wind howled in the pine boughs and made us shiver; but when we got near to Flagstaff we were glad to find that the storm had not been there. The ground was bare, dry although San Francisco Mountain was ~~white to the~~ white to the very base. After waiting an hour in a well-chosen camping-place, our wagon got in, and we soon were comfortably housed in our tents. The clouds rolled by and we beheld a grand spectacle in old San Francisco Peak, where I had spent such a delightful time a year ago. Between Woods's and Flagstaff, we saw one Three-toed Woodpecker, near James's.

Piranga hepatica. – Occasionally one or two.
Dendroica graciae. – Common; singing.
Contopus richardsonii. – Common.
Contopus borealis. – One near Flagstaff.
Junco dorsalis. – Not seen till near Flagstaff.
Tyrannus vociferans. – One specimen taken.
~~Not~~ Common ~~until~~ all the way through the pine timber – especially at Flagstaff.
Melanerpes formicivorus bairdi. – Common well up towards Flagstaff.
Myiarchus cinerascens propinquus. – Common.
Troglodytes aëdon parkmanni. – Common near Flag.
Selasphorus platycercus. – Common all the way.
Micropus melanoleucus was not seen after we reached the edge of pine timber belt, and the mockingbird (Mimus polyglottus) was left there too. Molothrus ater obscurus was last seen – a herd of cattle near Pine Springs, at Woods's

and Mundo's Brewer's Blackbirds were seen, as well as at Flagstaff, & indeed, everywhere, where there were ranches.

Bubo virginianus subarcticus. – One at Woods's.

Zenaidura macroura. – Common all the way.

Ægialitis vociferus. – Common & breeding at Woods's.

Colaptes cafer. – Common all the way.

Spizella socialis arizonae. – Common all the way.

Buteo borealis calurus. Common everywhere.

Piranga ludoviciana. – Common all the way.

Sitta pygmaea do

Sitta carolinensis aculeata do

Parus gambeli do

Tachycineta thalassina. do

Progne subis. – Occasionally seen all the way. Their loud chirping heard especially at evening.

Sialia arctica. – A beautiful male, in a Chinaman's yard, in Flagstaff, was the only one seen.

Cathartes aura. – Everywhere

Sialia mexicana. – Feeding on butterflies; common.

Cyanocephalus cyanocephalus. – Common and noisy in the trees around our camp at Flagstaff.

Loxia curvirostra stricklandi. – Very common in pines at Flagstaff. Call note like a small chickens uttered on the wing. Tamias lateralis near Flagstaff

May 28th, 1888.

Said good bye to the soldier escort and gave each of the five a dollar for tobacco & started by train for Fort Wingate, at nine o'clock, A.M. I felt very sorry to leave Arizona, and anyone would on that beautiful morning. Cross-bills were flying wildly about and so were Max Williams Waterthrushes. Robins, Plumbeous Vireos, and Tanagers were singing everywhere, and WA "Frisco" while with snow!

May 28th – Continued.

We travelled as far as Fort Wingate, New Mexico, by daylight. At Winslow, where we had dinner, we reached the Little Colorado River, along which we travelled a good many miles. The region is arid and sandy. Dwarfed Cottonwoods grow along the river, and also a few willows. As we approached the New Mexican line, enormous cliffs of red sand-rock came into view, and we were soon amongst rocky foothills that assumed strangely fantastic shapes – notably a rock butte known as "the Navajo Church". The scenery of western New Mexico was very grand and beautiful. Many Navajo Indians were seen, with their dwellings in the distance. Some were herding sheep and cows, others breaking horses. Ravens of some species (probably C. cryptoleucus) were very common. Rabbits (Lepus texianus) were occasionally observed; and Prairie Dogs (Cynomys columbianus) lived in large colonies in many places, both in Arizona & Western New Mexico. There are large colonies near Winslow. One at Flagstaff.

May 29th, 1888.

Magpie. – A single one seen at Dorsey, New Mexico. Not seen between there and Trinidad, Colorado, at which place they breed plentifully.

Tyrannus carolinensis. – Several were seen at ranches a little way east of Las Vegas, N.M.

Melanerpes torquatus. – One seen at Otero, N.M.

Otocoris alpestris var. ?, Sialia mexicana & Progne subis were abundant all through the Mountains of New Mexico.

Chelidon erythrogastra. – I timed a Barn Swallow on the train, in New Mexico. It flew 30 miles per hour. Upon the mountain divide, between New Mexico and Colorado, a number of Lewis's Woodpeckers (Melanerpes torquatus) were seen, as well as some about Trinidad, Colorado.

May 29th, 1888 — Continued.

On the summit of the pass (on the Col. & N.M. line) were short-stemmed, dark-colored iris and the large, yellow legume found on the mountains of Arizona.

At Trinidad, Col., I saw the Yellow Warbler (Dendroica aestiva var ?), in cottonwoods in town. Mimus polyglottus was seen on the Cactus plain farther east (in Col.), and thence to where night overtook us, only Prairie or Burrowing Owls (in large villages of Cynomys (columbianus)) Shore Larks and Palamospiza melanocorys, except a solitary specimen of Melanerpes erythrocph. seen flying over our train. The Spanish Peaks were white with snow to their base. We retired for the night and were in Central Kansas when we awoke.

May 30th, 1888.

When we awoke we were in Kansas. The following birds were seen:—

Progne subis. —
Tyrannus carolinensis. — Central Kansas to Kas. City, Mo.
Mimus carolinensis. — do
Harporhynchus rufus. — do
Zenaidura macroura.
Dumicalus purpureus
Agilaius phoeniceus
Molothrus ater.
Sturnella magna.
Merula migratoria
Melospiza fasciata
Bartramia longicauda
Corvus americanus.
Cathartes aura. —
Chelidon erythrogastra
Petrochelidon lunifrons
Ortyx virginianus. — One on fence-post.

(City, Iowa by daylight)

May 31st, 1888. Kansas City Mo. to Sioux City, Iowa.

Birds & Mammals seen along the Missouri River, in Missouri:—

Passer domesticus. — Rather common in Kansas City & other towns
Tyrannus carolinensis. — Everywhere common.
Dumicalus purpureus. — Very abundant.
Agilaius phoeniceus. — Very abundant everywhere.
Icterus baltimore. — At Kansas City and other points.
Cardinalis cardinalis. — Missouri River at Kansas City.
Melospiza fasciata. — Common everywhere.
Picus pubescens. — One.
Buteo borealis. — Several seen.
Cathartes aura. — Common.
Accipiter cooperi. — Several.
Sturnella magna. — Everywhere abundant.
Porzana carolina. — One seen at a Station.
Progne subis. — Very common at intervals.
Cotile riparia. — Common.
Chaetura pelasgia. — Abundant.
Zenaidura macroura. — Everywhere common.
Ortyx virginianus. — Occasionally seen on fence-posts.
Harporhynchus rufus. — Common.
Merula migratoria. — Common.
Chelidon erythrogastra.
Falco sparverius. — Common.
Sterna forsteri. — Several flocks, on marshes in N. Mo.
Lepus sylvaticus. — One in N. Mo.
Fiber zibethicus. — Houses common everywhere.

Birds & Mammals seen along the Mo. River, in Iowa:—

Dumicalus purpureus — Very common.
Agelaius phoeniceus. — Everywhere abundant.
Falco sparverius. — Common
Sterna forsteri. — One small flock on a marsh.
Hirundo erythrogastra. — Common.
Progne subis. — Abundant in places.
Chaetura pelasgia. — Abundant.
Sturnella magna. — abundant.
Fiber zibethicus. — Houses abundant.
Lepus sylvaticus. — A single one seen.

June 1st, 1888. Minnesota River.

We passed through the greater part of the State of Iowa and half of Minnesota at night. When we awoke, this morning, we were nearly to the Minnesota River, upon which we afterwards rode to St. Paul. The following birds were seen:—

Passer domesticus.—Not abundant in towns.
Chondestes grammaca.
Ceryle alcyon
Riparia riparia
Dendroica æstiva
Melospiza fasciata
Sialia sialis
Molothrus ater
Agelaeus phœniceus
Quiscalus purpureus
Xanthocephalus xanthocephalus
Sturnella magna
Icterus baltimore.
Chaetura pelasgia.
Habia ludoviciana.
Petrochelidon lunifrons.
Zenaidura macroura.
Botaurus lentiginosus
A large Whitish wader (Recurvostra?
Tyrannus carolinensis
Dolichonyx oryzivorus.
Colaptes auratus.—
Turtles that appeared to be Chrysemys picta were very abundant in lakes near St. Paul.

August 6th, 1888, H. Snelling, Minn.

I have kept a painted turtle (Chrysemys picta) in a box in my yard since June 5th, giving it nothing but a little water ~~and~~ in a bunch and plenty of fresh grass. It has been laying eggs

about 4 at intervals of a week about. One laid this morning measures 33 X 17 m m. [illegible] as below

August 18th, 1888. H. Snelling, Minn.

6420 + 1431

Preserved two young Coots (Fulica americana), about as large in body as Robins, still in down plumage.
Podilymbus podiceps.—One adult seen.
Spatula clypeata.—Two young of year shot. This species bred commonly here this year.
Anas discors.—Common. Breds commonly.
Botaurus lentiginosus.—Several seen; breds.
Ardea herodias.—One seen. Nest or very young birds not seen, but undoubtedly breeds.
Rallus virginianus } Breed commonly.
Porzana carolina }
Bartramia longicauda.—Common in meadows.
Hydrochelidon nigra surinamensis.—Bred abundantly, but none seen since the cold snap a week ago.
Falco columbarius.—One seen Aug. 17th.
Falco sparverius.—Common
Progne subis.—Two seen Aug. 16th.
Cotile & Petrochelidon still abundant. Tachycineta bicolor becoming more abundant.
Totanus solitarius.—Now common in families, chiefly about small ponds and pools.
Chordeiles virginianus: In large flocks.
Dolichonyx oryzivorus.—In fall plumage. Still abundant.
A small bird with sharp note, flew over the post Aug. 16th. It may have been a Phalarop.
Xanthocephalus xanthocephalus.—One old male seen to-day (Aug. 18, 1888).
Arctomys monax.—Lives mostly in rushbottoms & rounded out & shrubbed trees last spring (Henry).

August 21st 1888. Ft. Snelling, Minn.

Ægialitis vociferus. – Several seen on Mississ. R.
Totanus solitarius. – Numerous on the Missis. River and indeed seen everywhere where there were pools of water or wet places.
Actitis macularia. – Common.
Hydrochelidon nigra surinamensis. – One seen. A heavy hail-storm a while ago appeared to cause nearly all to depart. In fact the one seen to-day was the first seen for several weeks. It still had a good deal of black below = more than half.
Seiurus naevius. – Now common.
~~Tot~~ Tringa minutilla. Several; the only ones now seen here.
Ardea herodias. – Becoming more numerous.

August 24th, 1888. Ft. Snelling, Minn.

Totanus melanoleucus. – One seen. The first.
Tringa minutilla. Two small flocks.
Actitis macularia. – One shot still was much spotted. Killed at same shot as another young of the year, probably its progeny.
? Nycticorax nycticorax naevius. – Two birds seen on a creek in Pike Island looked like young Night Herons, but may have been Bitterns.
Totanus solitarius. – Very abundant. I shot twelve (12) and could have killed more.
Ægialitis vociferus. – A good sized flock on an island in the Mississippi, but so shy that I could obtain none of them.
Procyon lotor. – Raccoons very abundant on the islands in the Rivers.
12 specimens of Totanus solitarius weighed 24 75/100 (24.75) oz. Avoirdupois. They were moderately fat.
2 specimens of Actitis macularia weighed 3 3/4 (3.75) Av.
3 " " Tringa " 2.90 oz. Av.

Labelled at time.

May 26th, 1888 Ft. Verde to Woods's Ranche, Arizona.

(See antea pp. 36 to 38.)

6382 Dendroica graciae ♂ ad. Measurements on Table
6383 " " ♂ ad. do.
Both shot at Woods's Ranche, Mogollon Mountains, 35 miles north of Fort Verde, Arizona.
6384 Sitta pygmaea. ♂ ad. Measurements on Table.
Shot at same place as above (Nos. 6382 & 6283).

May 27th 1888. Woods's Ranch to Flagstaff, Arizona

(See antea pp. 38 to 39.)

6385 Phalaenoptilus nuttallii. ♂ ad. Sitting on nest & 2 eggs, when shot. Measurements on Table. Woods's Ranch.
6386 Tyrannus vociferans ♂ ad. James's ranche, about 12 miles south of Flagstaff, Arizona. Meas. on Table.
6387 Piranga lutatica ♂ ad. Measurements on Table. Flagstaff, Arizona.

Birds Collected at Fort Snelling, Minn.

6388 Quiscalus quiscula aeneus. ♂ ad. June 9, 1888. Meas. on Tab.
6389 Hedia ludoviciana. ♂ ad. June 11, 1888. do
6390 " " ♂ immature June 11, 1888. do
6391 Turdus mustelinus. ♀ ad. June 11, 1888. do
6392 Agelaius phoeniceus. ♂ ad. June 19, 1888. do
6393 " " ♀ ad. June 19, 1888. do
6394 Icterus galbula. ♂ ad. June 19, 1888. do
6395 Dendroica aestiva. ♀ ad. June 19, 1888. do
6396 Quiscalus quiscula aeneus. ♀ ad. June 23, 1888. do
6397 Xanthocephalus xanthocephalus. ♀ ad. June 23, 1888. do
6398 Icterus spurius. ♂ juv. June 23, 1888. do
6399 Agelaius phoeniceus. ♂ ad. June 23, 1888. (Not skinned.) Meas. on Table
6400 Tyrannus tyrannus. ♂ ad. June 23, 1888.
6401 Vireo gilvus. ♂ ad. June 23, 1888. Meas. on Table.
6402 Antrostomus vociferus. ♀ ad. July 5, 1888. Parent 2 young. Meas. on Table.
6403 Hydrochelidon nigra surinamensis. ♂ ad. July 14, 1888. Meas. on Table.
6404 " " " ♂ ad. July 14, 1888. Meas. on Table.
6405 " " " ♂ ad. July 17, 1888. Meas. on Table.
6406 " " " ♀ ad. July 17, 1888. Meas. on Table

Birds Collected at Ft. Snelling — Continued.

6407	Hydrochelidon nigra surinamensis.	♂ ad.	July 19, 1888.		measurements on Table.
6408	" " "	♂ ad.	do		
6409	" " "	♂ ad.	do		
6410	" " "	♂ ad.	do		
6411	" " "	♂ ad.	do		
6412	Aix sponsa.	♂ juv.	July 24, 1888.	Minn River.	
6413	Actitis macularia.	♂ ad.	do	do	
6414	Hydrochelidon nigra surinamensis.	♂ ad.	July 24, 1888	do	
6415	" " "	♂ ad.	do	do	
6416	" " "	♂ ad.	do	do	
6417	" " "	♂ ad.	do	do	
6418	" " "	♂ ad.	do	do	
6419	Ceryle alcyon	♂ juv.	July 24, 1888	do	
6420	Fulica americana.	♂ juv.	August 18, 1888.	Island pond.	
6421	" "	♀ juv.	do	" "	
6422	Tringa minutilla.	♀ ad.	August 24, 1888.	Miss. River.	
6423	" "	♂ ad.		do	
6424	" "	♀ ad.		do	
6425	Actitis macularia.	♂ ad. (Spotted)		do	
6426	Totanus solitarius.	♂ ad.		do	
6427	" "	♂ ad.		do	
6428	" "	♂ ad.		do	
6429	" "	♀ ad.		do	
6430	" "	♀ ad.		do	
6431	" "	♀ ad.		do	
6432	" "	♂ ad.		do	
6433	" "	♂ ad.		do	
6434	" "	♂ ad.		do	
6435	" "	♀ ad.		do	
6436	" "	♀ ad.		do	
6437	" "	♂ ad.		do	

Mammals Collected in Minnesota:

780 ~~667~~	Lamias striatus lysteri.	♂ juv.	July 5, 1888.
~~668~~	Spermophilus tridecimlineatus.	♀ ad.	Aug 2, 1888.
~~669~~	" "	♂ juv.	Aug. 2, 1888.
~~670~~	" "	♂ juv.	Aug. 2, 1888.

September 4th, 1888. Ft. Snelling, Minn.

Tyrannus tyrannus. — One seen.

September 6th, 1888. Ft. Snelling, Minn.

Tachycineta bicolor. — One seen. Swallows seem recently to have departed.

The Oaks here are of two species, growing together in equal abundance. They are:— Quercus macrocarpa, Michx. (Bur-Oak. Over-cup or Mossy-cup White-Oak.); Quercus coccinea, Wag., (var. ambigua ?). Gray Scarlet Oak.

784 ~~667~~ Lepus sylvaticus ~~sylvaticus~~ meanesi Allen. ♂ ad. Ft. Snelling, Minn., Nov. 21, 1888. (Measurements on a loose sheet in type-writing.) Skin & Skull preserved. Measurements copied on Table Dec. 16, 1889.

Jan. 1st, 1889. Ft. Snelling, Minn.

Notes on December Birds:—

Lanius ludovicianus. — A few in the early part of December; most of them left in Nov.

Lanius borealis. — Very common the first two weeks in December, none since seen.

Bonasa umbellus. — A common resident.

Cupidonia cupido. — Resident; growing locally scarce.

Picus pubescens. — Common throughout.

Sitta carolinensis. — Common throughout.

Parus atricapillus. — Common throughout.

Certhia familiaris. — Common throughout.

Junco hiemalis } A few early in December.
Spizella montana }

Spinus tristis. — Common in places until Dec. 20.

Spinus pinus. — A few flocks early in Dec.

Zonotrichia harrisii. — One seen in the Post Dec. 29th.

Ampelis cristata. — A few all throughout the month; but most migrated in November.

December Birds — Concluded.

Bubo virginianus. — One heard. St. Paul and Minneapolis; not abundant.
Passer domesticus. — St. Paul and Minneapolis; not abundant.
Plectrophanes nivalis. — One flock (about 50) Dec. 29th.

No other species noted during the month. Birds very scarce although the weather was unprecedentedly warm.

February 15th, 1889. Ft. Snelling, Minn.

Hesperiphona vespertina. — A flock of about 50 were feeding on seeds of box-elder, near the Hospital. Flocks have been seen in various places in the vicinity of Fort Snelling during the past fortnight. They utter a low whistled chirrup, with the effect of a loud chattering when there is a flock. Single birds utter a loud call-note. They separated when fired at, but continually returned in small bunches to feed in the grove of box-elders where found. ♂ Irides, dark-brown — not hazel. Legs and feet purplish-brown. Bill, pale olivaceous yellow; extreme tip of maxilla, above, faintly brownish. Four females had the irides colored the same, but the bill was greenish-yellow.

6438	Hesperiphona	vespertina,	♂ ad.	Measurements on Table.
6439	"	"	♀ ad.	do
6440	"	"	♀ ad.	do
6441	"	"	♀ ad.	do
6442	"	"	♀ ad.	do

The male weighed 2 oz. 1/4 dr. avoir. The four females weighed together 8 oz. and 2 drachms avoir.

Febr. 18th, 1889. Fort Snelling, Minn.

6443	Coccothraustes	vespertina	♂ ad.	Measurements on Table.
6444	"	"	♂ ad.	do
6445	"	"	♂ ad.	do
6446	"	"	♂ ad	do
6447	"	"	♀ ad.	do
6448	"	"	♀ ad.	do
6449	"	"	♀ ad.	do
6450	"	"	♀ ad.	do

February 19th, 1889. Fort Snelling, Minn.

6451	Coccothraustes	vespertina	♂ ad.	Measurements on Table.
6452	"	"	♂ ad.	do
6453	"	"	♂ ad.	do
6454	"	"	♂ ad.	do
6455	"	"	♀ ad.	do

Eight males (nos. 6443 to 6446 + 6451 to 6454) weighed 1 lb., 40 gr., avoirdupois, or averaged 2 oz., 5 gr. each. Five females (nos. 6447 to 50 + 6455) weighed 10 oz. 2 drachms.

Sciurus hudsonius hudsonius. — One seen running in the trees below the Hospital on Febr. 18, 1889, about eleven o'clock, A.M. The sun was shining bright, but it was bitter cold, the thermometer having registered −17° F. the night before. It was probably 10° below zero at the time. They have been out all winter as their tracks in the snow indicate. This one entered a burrow in the ground.

Certhia familiaris
Sitta carolinensis
Picus pubescens
Parus atricapillus
} All common now, and commonly found together.

Carpodacus purpureus. — I wounded a bird that appeared to be this species, but I am quite likely to have been mistaken as the sun was shining in my eyes, and it was silent.

Spizella montana. — Three sparrows, probably tree-sparrows, were seen to-day. The first seen since the autumn I think.

Cyanocitta cristata. — Not abundant, but steadily present this winter to date.

Agelaius phoeniceus. — Mr. Rankey says that a flock of Blackbirds has laid about his barn-yard all winter this season. Last winter some stayed until frozen to death, and the same thing occurred in other winters.

February 20th, 1889. Ft. Snelling, Minn.

Prairie Hen. — Saw what appeared to be a Prairie Hen beyond Minnesota Row. It was wild. May have been Bonasa

February 21st, 1889. Ft. Snelling, Minn.

6456 Coccothraustes vespertina. ♀ad. Measurements on Table.
6457 " " ♀ad. do
6458 " " ♀ad. do
6459 " " ♀ad. do
6460 " " ♂ad. do
6461 " " ♂ad. do
6462 " " ♂ad. Not measured
6463 ~~Picus pubescens~~ ♂ad. do
6464 Picus pubescens ♀ad. 173; 315; 102; 65; culmen, 16; nost., 12; gape, 19; height of bill at base 5.5; width at base 6.5; tip of bill to center of pupil 23; to occiput, 37; base of bill to occiput 20.5; tibia 24; tars., 17; Mte., 17; claw, 7.5; Hte., 10; claw, 5.2; inner claw, 7; claw of reversed toe, 8.

February 27th, 1889. Ft. Snelling, Minn.

6465 Plectrophenax nivalis ♂ad. Measurements on Table.
6466 " " ♂ad. do
6467 " " ♂ad. do
6468 " " ♂ad. do
6469 " " ♂immature do
6470 " " (?) ad. (Sex not positively ascertained by dissection) do
6471* Coccothraustes vespertina (Coop.). ♂ad. No meas. Shot by Mrs. Mearns.

Corvus americanus. - First seen Febr. 27, 1889.
Next seen March 3, 1889.

Otocoris alpestris. - Common throughout February. I saw none in Nov. Dec. or Jan., but was not out of the fort, or even my house, very often.

Febr. 2nd, 1889. Fort Pembina, Dakota.

Plectrophenax nivalis. - In large flocks about the Q. M. Corrals.

Coccothraustes vespertina. - Several seen on Red River of the north.

Lepus americanus. - Was tunnelling under drifted snow. Very abundant but could not be found

on account of the deep snow, although them ran freely about at night upon the surface for the most part. Mr. Cavalier told me he shot 80 with a rifle in one day last fall. At the Post Hospital is a very complete list of the flora and fauna. Mr. Cavalier told me the only squirrel there is Sciurus hudsonius. The coldest post in United States. During my stay of 9 nine days I was suffering from a bronchitis, and only went out hunting one day, when I only saw the two birds mentioned. One day I drove to the town of Emerson, in Manitoba, where I watched the "natives" enjoying their toboggan sliding. No birds seen. A wolf (Canis lupus) seen crossing the Red River of the North. I was told that the Northern Hares (Lepus americanus) nearly all died off a few years ago, when the wolves also left, but returned when the rabbits crop increased to the usual abundance.

March 2nd, 1889 Ft. Snelling, Minn.

The first waterfowl seen - two flocks of ducks in air holes in the Mississippi River. Species not recognizable.

March 4th, 1889. Ft. Snelling Minn.

6472. Coccothraustes vespertina. ♀ad. Measurements on Table.
6473 " " ♂ad not measured
6474 " " ♂ad. do
No. 785 Sciurus hudsonius ♂ad. Measurements on Table.

March 5th, 1889. Ft. Snelling, Minn.

No. 786 Sciurus hudsonius ♀ad. Measurements on Table.
Corvus (corax sinuatus?) - One seen circling over the Post Hospital - the first I have seen here. It probably was a Crow (C. americanus).

Note. - On March 1st, an enormous flock of Snowbirds doubtless Calcarius apponicus arose from a reedy lake and whirled off to a ploughed field. There were hundreds of them in the flock.

Otocoris alpestris usually seen singly or in pairs No large flocks

March 9th, 1889. Ft. Snelling, Minn.

Calcarius lapponicus is very abundant in the fields and prairies adjacent to the post. There are enormous numbers of them, but broken up into many small flocks. The wind was very high, so I could not shoot well on the wing nor see the birds on the ground; for they mostly resorted to windy places for protection from the wind. When flushed they would whirl off for a short distance, uttering a sharp, peculiar twittering, then returning and circling overhead. Those that I procured were shot singly on wing. On a quiet day hundreds of them could be shot; but my dust shells were soon exhausted, and I returned to the post with ten specimens, nine of which were males.

The colors of the soft parts were as follows: Irides brown. Bill brown (not yellow) tipped with black. Legs & feet brownish-black. Claws, black. Sexes alike so far as these colors are concerned.

6470 Calcarius lapponicus. ♂ad. Measurements on Table.
6476 " " ♂ad. do
6477 " " ♂ad. do
6478 " " ♂ad. do
6479 " " ♂ad. do
6480 " " ♂ad. do
6481 " " ♂ad. do
6482 " " ♂ad. do
6483 " " ♂ad. do
6484 " " ♀ad. do
6485 Otocoris alpestris praticola ♂ad. do

Irides, hazel. Bill plumbeous above; below pale bluish gray at base shading to dark plumbeous at extremity. Legs & feet brownish-gray. Claws plumbeous-black.

6486 Otocoris alpestris praticola ♂ad. Measurements on Table.

Colors of parts the same as above.

6487 Otocoris alpestris praticola ♀ad. Measurements on Table.

Colors of parts as above, but bill paler.

Nine males Lapland Longspurs (Nos. 6475 to 6483) weighed 10 oz. & 140 grs. Avoir. A female (No.
Two male Shore Larks (Nos. 6485 & 6486) weighed 2½ oz.
One female " " (No. 6487) weighed 1 oz. & 120 grs.

March 11th, 1889. Fort Snelling, Minn.

6488 Otocoris alpestris praticola ♂ad. Measurements on Table.
6489 Coccothraustes vespertina. ♂ad. Not measured.

March 13th, 1889. Ft. Snelling, Minn.

6490 Otocoris alpestris praticola ♂ad. Measurements on Table
6491. " " " ♀ad. do
6492 " " " ♀ad. do

March 18th, 1889. Ft. Snelling, Minn.

6493 Calcarius lapponicus. ♂ad. Measurements on Table.
6494 " " ♂ad. Not Measured.
6495 Otocoris alpestris praticola ♀ad. do

Sialia sialis. - One bluebird in ~~first~~ full song, was the first this season.
Turdus migratorius. - First seen.

March 19th, 1889. Ft. Snelling, Minn.

6496 Calcarius lapponicus. ♂ad. Measurements on Table
6497 " " ♂ad. do
6498 " " ♂ad. do
6499 " " ♂ad. Not measured.
6500 " " ♂ad. Not measured.
6501 " " ♀ad. Measurements on Table.
6502 " " ♀ad. Measurements on Table.
6503 Otocoris alpestris praticola ♂ad. Measurements on Table.
6504 " " praticola ♂ad. do
6505 " " alpestris ♂ad. do
6506 " " praticola ♂ad. do
6507 " " alpestris ♀ad. do
6508 " " praticola ♀ad. do

Notes: Spizella montana was not present at all during the winter. The first one was seen March 3rd. Several more were seen on the 8th and 11th. The first flock on the 14th. Became abundant on March 20, when large flocks appeared in full song. Very abundant March 21st.

Junco hyemalis. – First seen March 20th. None were present during the winter. On March 21st small flocks were seen, and the birds were singing.

~~Spizella pallida – First seen March 21st.~~

Sialia sialis. – Common in the port March 20th. Full song.

Merula migratoria. – A number in the Post on March 20th were in full song.

Ducks. – A number of large flocks flying north in evening of March 20th.

Corvus americanus. – Migrating in numerous small flocks.

Spinus pinus. – Flock in the port March 16th.

Plectrophenax nivalis. – Last seen March 15th; a single male in a large flock of Lapland Longspurs.

Calcarius lapponicus. – Enormous flocks, and many scattered one seen on the prairie farms west of the reservation on March 18th and 19th. A few seen in the port March 20th. In the prairie scattered ones and small flocks were seen in the edges of ploughed fields and amongst the weeds in corn stubble, where they hid so as to escape notice. They arise with a loud whirring noise, twittering loudly. Flocks were constantly seen or heard flying overhead, usually so high as to be beyond range; but it was difficult to find their feeding ground. Just before sundown I found thousands of them in a swampy meadow and in an adjacent corn-field and strawberry bed; but they were so scattered that I only got two birds when I fired. They were rather shy, but did not leave the place, nor would they usually all fly up when I fired at them. As I walked along some would squat close until I came close upon them, then flying up with a loud whir and twitter that started more ahead, who would keep joining them until quite a column had been recruited, when they would whirl about high in the air singing noisily as they flew. They always sing when flying. One mellow note resembles one of the Bluebird's song, and another is like the Meadow Lark's. Sometimes they would fly up and realight a little way ahead, and thus I could herd them along in front of me, while they uttered a chirp of alarm that sounded very like a flock of young chickens. They alight on fence-posts, tall weed, corn-stalks and even trees to sing their sweet song. They are now moulting badly on head & throat particularly. See Nelson's notes on same.

Otocoris alpestris. – On March 19th, I found a flock of Shore Larks, from which I killed a pair at one shot. I was immediately struck by their more robust build, large size, and yellow throat and frontal band. They are Nos 6507 and 6505. They weighed nearly half as much again as the common form, which latter have long since paired off, and will soon be nesting. The male often flies up in the air until it becomes a mere speck or actually disappears from view. It sings as it ascends, which it does by spurts, circling higher at each effort. When finally lost sight of its song is still distinctly heard. After a while it is seen descending. It lets go of itself and allows itself to drop a long distance singing with wild abandonment, then rising higher and dropping again and again. Ten minutes are usually occupied by this performance. It sings a little everywhere. Sometimes it moves barely away from the wheel track of your buggy and sings as you pass within a couple of yards of it.

Agelaius phoeniceus. – Arrived at post on afternoon of March 21st. A flock of a dozen, all males in full song. Abundant Mar. 22.

Melospiza fasciata. – One heard singing in the morning of March 22nd. Abundant March 23rd.

Scolecophagus ferrugineus. – Arrived in small flocks March 23rd.

Carpodacus purpureus. – One flock arrived March 23rd.

Zonotrichia leucophrys – Arrived in large flocks Mar 23rd.

Note. – Both rivers are now entirely free of ice and Ducks and Geese in full migration. Butterflies and house flies (dark blue ones) first seen March 18th. Mosquitoes March 23rd.

Tamias striatus. – First seen March 23rd; one.

March 23, 1889. Ft. Snelling, Minn.

No. 788 Arctomys monax ♂ ad. Measurements on Table
No. 786 Lepus sylvaticus ♂ ad. do
No. 789 Sciurus hudsonius ♂ ad. do
6509 Carpodacus purpureus ♂ ad. do
6510 Spizella monticola ♂ ad. do
6511 " " ♂ ad. do
6512 Agelaius phoeniceus ♂ ad. do
6513 " " ♂ ad. do

March 25th, 1889. Ft. Snelling, Minn.

Sayornis fuscus. – One Phoebe seen between the Post and St. Paul. This is the first. No Fox Sparrows yet.
Sturnella magna. – First seen to-day.

March 27th, 1889. Ft. Snelling, Minn.

6514 Merula migratoria ♂ ad. Measurements on Table.
6515 " " ♀ ad. do
6516 " " ♂ ad. do
6517 " " ♂ ad. do
6518 Sialia sialis ♂ ad. do
6519 " " ♀ ad. do
6520 Scolecophagus carolinus ♂ ad. do
6521 " " ♂ ad. do
6522 Carpodacus purpureus. ♂ ad. do
6523 " " ♂ ad. do
6524 Picus villosus ♀ ad. do This specimen has the under lining of wings white with a row of about six ~~of~~ bar-shaped spots, each occupying the centre of a greatest under covered along the radial joint.

March 28th, 1889.

Sayornis fuscus. – Several in the fort. The first noted since the first one March 25th.

March 30th, 1889. Ft. Snelling, Minn.

No. 790 Seiurus volucella. weight, 1.155 oz. ♀ ad. Measurements on Table.
6525 Bonasa umbellus ♀ ad. Measurements on Table.
6526 Lanius borealis ♂ ad. do
6527 Picus villosus ♀ ad. do
6528 Merula migratoria ♂ ad. do
6529 " " ♀ ad. do
6530 Spizella monticola ♂ ad. do
6531 " " ♂ ad. do
6532 Junco hyemalis ♂ ad. do
6533 Coccothraustes vespertina ♂ ad. Not measured weight
6534 " " ♂ ad. do "
6535 " " ♂ ad. do "
6536 " " ♂ ad. do "
6537 " " ♀ ad. do "
6538 " " ♀ ad. do "
6539 " " ♀ ad. do "
6540 " " ♀ ad. do "
6541 " " ♀ ad. do "

Males together weigh 3.900 oz.
5 females weigh 4.180 oz.

Note. – Female Robins (Merula migratoria) can be distinguished from males at this season by having the maxilla dusky brownish at base, instead of yellow as in males.
Bonasa umbellus. – No. 6525 had its crop filled with the leaves of a green plant ( ) and its gizzard with round seeds, half-digested leaves and a large pebble, together with smaller grains of sand & pebbles. Spec. from stomach preserved.
Seiuropterus volucella. – On firing into a leaf nest, about 40 feet high in the trebble fork of an ash-tree, No. 790 ♀ ad. ran out and was shot. I then climbed to the nest. There were no more squirrels in it. The one shot was not pregnant. The nest was 2 feet in diameter, composed externally of ash twigs with the leaves attached. Its construction showed much more skill than the Gray Squirrel displays in the construction of its nest. The ash leaves attached to the twigs, some of which latter were as thick as my little finger, were brown (dead leaf color) on the outside of the nest but bright green within. In the middle of the nest

was a ball of fine inner shreds of bark ten inches in diameter, which constituted the nest proper. The inside was lined with a number of birds' feathers, very soft and warm. The tree was in a deep ravine, on the south side (facing the north). The squirrel's stomach contained a mass of half-digested acorns of a pinkish color, of the consistency of the pasty. The middle of the abdominal surface was tinted with yellowish-brown. A specimen of nest lining preserved.

April 2nd, 1889. Ft. Snelling, Minn.

No. 7 91. Tamias striatus griseus. ♀ ad. Measurements on Table. Wt. 1800 gr.
6542 Bonasa umbellus. ♂ ad. Measurements on Table. Weight 1 lb, 7 oz. Av.

Buteo borealis. - Flock of seven seen flying over the Mississippi River at mouth of Minnehaha Creek. The first one was seen March 16th.
Cathartes aura. - I saw a number of birds at an immense distance that appeared to be Turkey Buzzards.
No Fox Sparrows have been seen since last fall.
Fulica americana. - First seen.

April 5th, 1889. Ft. Snelling, Minn.

6543 Bonasa umbellus ♀ ad. Measurements on Table.
6544 Sialia sialis ♂ ad. do
No. 79 Lepus sylvaticus ♀ ad. do

April 7th, 1889. Ft. Snelling, Minn.

Colaptes auratus. - First seen; several. April 8.
Ægialitis vociferus. - First seen; one.

April 9th, 1889. Ft. Snelling, Minn.

Ceryle alcyon. - First seen.

April 11th, 1889. Ft. Snelling, Minn.

Swallows (Tachycineta bicolor). - First seen today. There were several single ones and a large flock.
Poocaetes gramineus. - First seen; singing. Common.
No Fox Sparrows have yet been seen.

April 12th, 1889. Ft. Snelling, Minn.

Ampelis cedrorum. - First seen. Am flock.

Plant Calendar. (Compare p. 104.)

Dicentra cucullaria. - First flowers April 10.
Blood Root " " " 9.
Pasque-Flower (Anemone patens var nuttaliana). March 30.
Alnus (serrulatus?). - Shedding pollen April 1st.
Salix (?). - Catkins from March 5th. Pollen ripe Apr. 1st.
Hepatica triloba. - April 11th.
Acer (?) March?.
White Dog-tooth Violets. April 19th. Five in bloom.
Thalictrum anemonoides. - April 18th. Common.
Ranunculus - April 14th. Common.
Dandelion April 20th.
Yellow Euphorbias. - May 1, 1889.

Gulo luscus. — Mr. Stewart Daniels shot a Wolverine at the head of the San Juan River, close to the south fork of the Rio Grande, at Summit, Rio Grande Co., Colorado, in lat. 36° 30' N., in winter of 1878-79. It was stuffed in the Post Office.

He also saw one in 36° 22', 2 miles above (north of) Pogosa Springs. This one would come down a miner's chimney, when the fire was out, in search of food in the cabin. Mr. Hendricks, now a dentist of Flagstaff, Arizona, killed one at Pogosa Springs, in the winter of 1878.

Billy McLeod, an old government scout, told Daniels that "Go-for-Gods" (Gopher Gods) were found at McClure Lake, Arizona, below the 1882 battle ground with the Apaches. This place is at an altitude of 6000 feet or over, between Clear Creek and Jack's Canyon. Mr. Daniels went there in 1886, and found their tracks in abundance.

April 13th, 1889. H. Snelling, Minn.

6545 Spizella monticola ♂ ad. Measurements on Table.
No. 1006 793 Tamias striatus ♀ ad. do Contained 4 fortuses.
Spizella socialis. – First seen; trilling.
Zenaidura macroura. – First heard cooing; there were several.

April 14th, 1889. H. Snelling, Minn.

No. 794 1006 Spermophilus tridecemlineatus ♂ ad. Measurements on Table
796 1007 " " ♂ ad (bob-tailed specs.) do
796 1008 " " ♀ ad. do
Spinus tristis. A number of yellow males seen in a flock to-day.
Aquila chrysaëtos. – One seen to-day.
Spizella socialis. – Several trilling.
Lanius ludovicianus excubitoides. – First seen.

April 15, 1889. H. Snelling, Minn.

797 1009 Spermophilus tridecemlineatus. ♂ ad. Measurements on Table.
798 1010 " " ♂ ad. do
1011 " " ♂ ad. do
6546 Colaptes auratus ♂ ad. do
Spinus tristis. – Males with black wings & yellow bodies seen.

April 16th, 1889. H. Snelling, Minn.

800 1012 Geomys bursarius tabpoides ♂ ad. Measurements on Table.
Dendroica coronata. – First seen; several.

April 17th, 1889. H. Snelling, Minn.

6547 Colaptes auratus ♀ ad. Measurements on Table.
Dr. Dutton shot it with the little Stephens' Rifle!

April 19th, 1889. H. Snelling, Minn.

Swallows. – First seen since April 11th.
Sphyrapicus varius. – First seen.
801 1013 Sciurus hudsonius. ♂ ad. Measurements on Table.
?Melospiza lincolni (?). – A Sparrow that looked like this was seen on April 22nd, 1889.

April 22nd, 1889. H. Snelling, M.

Regulus calendula. – First seen; singing.
Carpodacus purpureus. – Very abundant.
Sphyrapicus varius. – Now common; utters a squeaking noise like two branches rubbing, and a note like the Cat-bird.
Colaptes auratus. – In flocks of 20 to 40.
Ampelis cedrorum. – Flocks of 40 or 50.
6548 Colaptes auratus ♀ ad. Measurements on Table.

April 24th, 1889. H. Snelling, Minn.

Actitis macularia. – First seen, one pair.
6549 Colaptes auratus ♀ ad. Measurements on Table.
6550 " " ♂ ad. do
6551 " " ♂ ad. do
6552 Cyanocitta cristata ♂ ad. do
6553 Tachycineta bicolor ♂ ad. do

April 26th, 1889. H. Snelling, Minn.

6554 ~~Sphyrapicus varius~~ ♂ ad. Measurements on Table.
6555 Colaptes auratus ♂ ad. do
6556 Sphyrapicus varius ♂ ad. do
6557 Harporhynchus rufus ♂ ad. do
*6558 Sturnella magna ♂ ad. [Shot by E.W.M.] do
6559 Sayornis fuscus. ♂ ad. do
6560 Sturnella magna. ♂ ad. There was a deformity of the bill. No measurements, consequently, were taken. Its weight was 1,900 grains.
Harporhynchus rufus. – First seen; one pair; singing.
Cyanocitta cristata. – Going into holes in the soft limestone to roost at night.
802 1014 Sciurus hudsonius ♂ ad. Shot by Mr. Means. Wt. 342.5 gr. Measurements on table. Shot on Pike's Island, at the junction of the Minn. & Miss. Rivers
Pandion haliaëtus carolinensis. – One seen.
Lanius ludovicianus excubitoides. – One seen.

April 29th, 1889. Ft. Snelling, Minn.

6561 Picus pubescens ♂ad. Measurements on Table.
6562 " " ♀ad. do
6563 Luscalus purpureus ♂ad. do.
6564 Coccothraustes vespertina ♀ad. No measurements taken. Bill green(!) without much olive or yellow.
Pirogne rubis. – First seen.

April 30th, 1889. Ft. Snelling, Minn.

Lonotriehia albicollis. – First seen; singing.
(Turdus aonalaschkae pallasii. – First seen.) one.

May 2nd, 1889. Ft. Snelling, Minn.

Drove about seven miles west of the fort to Lake Harriet. In the numerous lakes thereabouts were dozens of ducks, mud hens, and divers. I identified Mallards (Anas boschas) and Blue-winged Teals (Anas discors) in abundance. Coots (Fulica) were very plentiful. Colymbus auritus and Podilymbus podiceps were also numerous. A pair of Greater Yellow-legs (Totanus melanoleucus) and one of Killdeers (Ægialitis vocifera) were seen and one Bank Swallow (Cotyle riparia delicata). At Lake Harriet hundreds of Crow Blackbirds (Quiscalus quiscula aeneus) were swarming.
Turdus aonalaschkae pallasii. – One shot; only one seen.
Junco hyemalis. – One seen.
Chondestes grammacus. – Abundant. First seen; singing in cottonwoods beside fields in parks.
Molothrus ater. – First seen; several.
Lanius ludovicianus excubitoroides. – Common; its loud whistle sounds like "Knee-deep".
6565 Sphyrapicus varius ♂ad. Measurements on Table.
6566 Buteo latissimus ♀ad. do Stomach contained Red-bellied Snake & Dragon-fly.
6567 Ægialitis vociferus ♂ad. do
6568 Luscalus quiscula aeneus ♀ad. do Worn plumage.
6569 " " " ♀ad. do
6570 Pooecetes gramineus ♀ad. do

(May 2nd Continued.)

No. 1015 Sternopilus franklinii. ♂ad. Measurements on Table.
No. 1016 Sternopilus tridecemlineatus. ♀ad. (8 fortuses) do
6571 Pooecetes gramineus ♂ad. Measurements on Table.
6572 Agelaius phoeniceus ♂ad. do
6573 " " ♂ad. do
6574 " " ♂ad. do
6575 Anas discors ♂ad. do
6576 Totanus melanoleucus ♂ad. do
6577 Zenaidura macroura ♀ad. do
6578 Turdus aonalaschkae pallasii ad. (Not skinned) do
6579 Molothrus ater ♂ad. do
6580 Melospiza fasciata ad. (not skinned). do
6581 Chondestes grammacus ♂ad. do

May 6th, 1889. Fort Snelling, Minn.

6582 Totanus flavipes ♂ad. Measurements on Table.
6583 " " ♂ad. do
6584 " " ♂ad. do
6585 " " ♂ad. do
6586 " " ♂ad. do
In the above five specimens of T. flavipes the irides were dark brown. Bill, brownish-black, tinged with olive at base above and with yellowish at base below. The legs and feet yellow, slightly tinged with olive-green at the joints. Claws, brownish-black.
6587 Tringa bairdii ♀ad. Measurements on table.
6588 " " ♂ad. do
6589 Actitis macularia. ♀ad. (Contains large eggs) do
6590 Totanus solitarius ♂ad. do
6591 " " ♂ad. do
6592 Ammodramus sandwichensis savanna. ♀ad. do

May 8th, 1889. Fort Snelling, Minn.

6593 Seiurus naevius ♂ ad. Measurements on Table. Irides dark brown. Bill dark brown, lined with flesh-color along commissural opening, and flesh color at base of mandible. Tarsi and feet very pale yellowish-brown. Claws darker brown. Singing a very sweet song.

6594 Tringa maculata ♀ ad. Measurements on Table.

6595 " " ♂ ad. do

The above two specimens have dark brown irides. Bill olive, shading to ~~dusky~~ black at extremity, and yellow at base of mandible. Legs and feet yellowish olive. Claws blackish. From a large flock. They fly in close flocks of four to fifty together. When rising utter a chattering chirruping note.

6596 Totanus flavipes. ♂ ad. Measurements on Table.

6597 " " ♂ ad. do

6598 " " ♀ ad. do

6599 " " ♀ ad. do

6600 " " ♀ ad. do

6601 " " ♀ ad. do

Migration data:-

Spizella (pallida?). - May 4th; not common until May 10th.

Chaetura pelagica. - First seen May 4th; many; common afterwards.

Chiroicola persica. - First seen ~~May~~ April 26 ("the day Ella shot the Meadow Lark and Flicker"), when they were entering their burrows in the soft sandstone bluffs in numbers. Some of the Swallows previously seen may (probably were) have been Bank Swallows. Tachycineta ~~thalassina~~ bicolor first appeared on April 11th when numbers were noted.

Mniotilta varia. - First seen May 5th; singing; common afterwards.

Habia ludoviciana. - First seen May 5; singing; common afterwards; females not seen till May 8th. Very abundant everywhere.

Seiurus naevius. - First seen and heard singing May 5th.

Totanus flavipes. - First seen May 6th; abundant on Pikes Island. A hunter killed 30 "snipe" near the Post a fortnight before. They were probably mostly Yellow-legs & Grass Snipe (Tringa maculata, although I did not see the latter myself).

Totanus solitarius. - First seen May 6th, then abundant [illegible]

May 13th, 1889. Ft. Snelling, Minn.

6602 Dolichonyx oryzivorus ♂ ad. Measurements on Table.

6603 " " ♂ ad. do

6604 " " ♂ ad. do

6605 " " ♂ ad do

6606 " " ♂ ad. do

6607 " " ♂ ad. do.

In the above six Bobolinks the irides are dark brown. The bill is blackish above, slightly bronish on sides of maxilla at base, with mandible bluish-gray slightly tipped with blackish. The legs, feet and claws are brownish. The darkest specimens (like No. 6602, in which there is so little fulvous edging to the feathers of the under surface and interscapular region, have the darkest legs & feet, the brown having a plumbeous shade. Claws darker brownish.

6608 Icterus galbula. ♂ ad. Measurements on Table.

6609 " " ♂ ad. do

6610 " " ♂ ad do Weight 525 grs.

6611 " " ♀ ad. (some black on head) do Weight 545 grs.

In the above four Orioles the irides are dark brown. The bill is blue black on maxilla, with mandible ~~blue~~ and a narrow commissural line of maxilla bluish-gray, both mandibles slightly tipped with horn-color. The female (No. 6611) has the maxilla less pure black (faintly brownish).

6612 Tringa minutilla ♂ ad. Irides dark brown. Bill dusky. Legs and feet pale yellowish-olive; claws blue-black. Measurements on Table.

6613 ~~Tanagra~~ Habia ludoviciana ♂ immature. Not measured because immature.

6614 Melanerpes erythrocephalus ♂ ad. Measurements on Table. Irides brown. Bill pale blue at base shading to dark bluish-gray at extremity. Legs & feet olivaceous gray. Claws plumbeous.

6615 Euscelus guiscula aeneus ♂ ad. Measurements on Table. Irides pale yellow. Bill, legs, feet & claws black.

6616 Tyrannus tyrannus ♂ ad. Measurements on Table. Irides dark brown. Bill, legs feet and claws black. Tips of wings dull white.

Migration data: —

Vireo maculata. — In large flocks on Pike's Island May 6th, but had probably been a week earlier. Seen at various times up to May 12th.

Empidonax minimus. — First seen May 6th — Common afterwards.

Contopus virens — First seen May 6th — Common thereafter.

Sayornis sandwichensis savanna. — do

Tyrannus tyrannus. — First seen May 8th — Common thereafter.

Galeoscoptes carolinensis. — First seen May 8th — Common May 11th.

Dendroica aestiva. — First seen May 8th; not common till May 12th.

Spinus canadensis hutchinsii. — Large flocks appeared May 8th after a protracted blizzard blowing across the continent from the west.

Seiurus aurocapillus. — First seen May 8th; common thereafter.

Troglodytes aëdon. — First seen May 8th; common thereafter.

Turdus mustelinus. — First seen May 8th — singing — common.

Turdus do

Dolichonyx oryzivorus. — First seen May 12th; common thereafter.

Vireo minutilla. — First seen May 13th — the only one that I saw.

Melanerpes erythrocephalus. — First seen May 13th; only the one shot.

Sayornis fuscus. — A nest containing 5 eggs much incubated found in hospital piazza May 8th.

Melospiza fasciata. — A nest containing 3 young & 2 nearly-hatched eggs was found on the ground on Pike's Island May 13th.

Vireo olivaceus. —

Vireo gilvus. —

Vireo flavifrons. —

Piranga erythromelas. — First seen May 10th.

Spinus tristis. — In perfect plumage May 12th.

Xanthocephalus xanthocephalus. — First seen May 10th.

Antrostomus vociferus. — First heard May 8th.

Chordeiles virginianus. — First seen May 12th.

"Two White Cranes" in pond back of target range May 13th.

Spiza cyanea. — First seen May 17th. One in Hosp. garden.

Melospiza lincolni. — First shot May 18. May have seen it earlier.

Dendroica striata. — First seen May 17; common.

Zonotrichia querula. — First seen May 19th; one flock.

Trochilus colubris First seen May 20th. Several

Dendroica pennsylvanica. — First seen May 20th. Common; singing.

May 16th 1889. Ft Snelling, Minn.

6617	Helmitheros vermivorus	♂ immature.	Not measured.
6618	Helmitheros vermivorus	♂ ad.	Measurements on Table.
6619	" "	♂ ad.	do
6620	" "	♀ ad.	and a few rose feathers in breast. Wing lining rosy. do
6621	" "	♀ ad.	with rose color. Wing lining yellow tinge. do
6622	Piranga erythromelas	♂ ad.	do
6623	Harporhynchus rufus	♂ ad.	do
6624	Myiodioctes pusillus	♂ ad.	do
6625	Dendroica aestiva	♂ ad.	do
6626	" "	♀ ad.	do

May 18th 1889. Ft. Snelling, Minn.

6627	Empidonax minimus	♂ ad.	Measurements on Table
6628	Melospiza lincolni	♀ ad.	do
6629	Piranga erythromelas	♂ ad.	do
6630	" "	♀ ad.	do
6631	Ampelis cedrorum	♀ ad.	do
6632	Turdus mustelinus	ad. Not skinned.	do
6633	Galeoscoptes carolinensis	ad. do	do
6634	" "	ad. do	do

May 20th 1889. Fort Snelling, Minn.

6635	Cyanocitta cristata	♂ ad.	Measurements on table.
6636	" "	♀ ad.	do
6637	Dendroica pennsylvanica	♂ ad.	do
6638	Dendroica aestiva	♂ ad.	do
6639	" "	♂ ad.	do
6640	Spinus tristis	♀ ad.	do
6641	Seiurus noveboracensis	♂ immature.	do
6642	Helmitheros vermivorus	♂ ad.	do
6643	Chondestes grammacus	♂ ad.	do

Seiurus noveboracensis. — First seen; several.

Bonasa umbellus. — Still drumming.

Dendroica aestiva. — First nest seen, appeared to be finished.

Merula migratoria. — Young flew from nest in Norway spruce by Headquarters Building in Ft Snelling, May 18th.

May 22nd, 1889. Ft. Snelling, Minn.

Hydrochelidon nigra surinamensis. – First seen.
Sialia sialis. – Feeding their young.
No Nuthatches or Certhia familiaris have been seen for a month or more about Snelling.
Chlorocola riparia. – A youngster at post got eggs May 17th.
Scolecophagus ferrugineus. – A female was shot by a boy in the post on May 16th.
Otocoris alpestris. – Feeding their young.
Gray Gophers now appear to be abundant everywhere.

May 23rd, 1889. Fort Snelling, Minn.

6644 Helminthophila peregrina ♂ ad. Measurements on Table. Irides ~~dark~~ brown. Bill with maxilla blackish, mandible yellowish-horn-color at base shading to plumbrous on terminal portion; a pale commissural line. Tarsi plumbrous; feet plumbrous-olive; claws olive-brown.

6645 Dendroica striata ♂ ad. Irides brown. Measurements on Table. Irides brown. Bill with maxilla brownish-black ~~; mandible~~ commissural line and mandible at base yellowish, the latter becoming plumbrous at tip. Tarsi brownish-yellow; feet yellow; claws yellowish-brown.

6646 Dendroica pennsylvanica ♀ ad. Irides brown. Bill with maxilla blackish, mandible plumbrous, with a pale (horn-color) commissural line. Legs, feet and claws plumbrous.

6647 Geothlypis philadelphia. ♂ ad. Measurements on Table. Irides hazel. Bill dusky above, entirely flesh-color below. Tarsi + feet flesh-color. Claws very pale ~~yellowish~~ brownish.

6648 Setophaga ruticilla ♂ immature. Measurements on Table. Irides brown. Bill brownish-black above, dusky plumbrous below. Tarsi, feet and claws brownish-black.

6649 Vireo gilvus ♂ ad. Irides brown. Bill brownish plumbrous above; below pale grayish, with a light commissural line. Tarsi feet and claws plumbrous. Measurements on Table.

6650 Vireo olivaceus ♂ ad. Measurements on Table. Irides red. The bill legs + feet as in the Warbling Vireo above (No. 6649) except that the bill is a trifle darker.

6651 Icterus galbula ♀ ad. Measurements on Table.

May 23rd – Continued.

6652 Molothrus ater ♂ ad. Measurements on Table
6653 Troglodytes aëdon parkmanii ♀ ad. do
6654 Coccothraustes borealis ♂ ad. do
6655 Ammodramus savannarum passerinus ♀ ad. do
6656 Hydrochelidon nigra surinamensis. ♂ ad. do
6657 " " " ♀ ad. do
6658 " " " ♂ ad. do
Myiodioctes canadensis. – First seen; several; singing.

May 24th, 1889. Ft. Snelling, Minn.

6659 Melospiza fasciata. ♂ nullus. Just from nest; not measured.
6660 Spiza cyanea ♂ Immature not measured.
6661 Chordeiles virginianus. ♂ ad. Measurements on Table.
6662 Melospiza fasciata ♂ ad. do
6663 Icterus galbula ♂ ad. do
6664 Cyanocitta cristata ♂ ad. do
6665 Sphyrapicus varius ♀ ad. do

May 27th, 1889. Ft. Snelling, Minn.

6666 Melanerpes erythrocephalus ♀ ad. Measurements on Table.

May 28th, 1889. Ft. Snelling, Minn.

Picus pubescens. Found nest in a willow tree or leaning w against a willow-tree. It contained one young + 5 eggs just hatching.
Agelaius phoeniceus. – Found nest with one egg.
Progne subis. – Young on wing May 18th. Many young [illegible]

Measurements and descriptions of two sets of eggs and two nests of Sayornis fuscus (Phoebe), built by the same pair of birds on a joice in the piazza-roof of the post hospital at Fort Snelling, ~~Minn.~~ ~~Minnesota~~. The first nest with 5 eggs was take 1889. The eggs are unspotted white, excepting one that sparsely dotted, chiefly at the greater end with reddish-brown. They measure respectively 14.6 x 19.4; 14.8 x 19.2; 14.4 x 19 (the spotted one); 14.7; 19.3; 14.6 x 19.8. Height of nest 50; greatest width 130 Inside depth 26; inside diameter. 65 m m. The nest

is composed of soft shreds of bark, stems of plants and blades and seed stalks of grasses, lined with with the finest material of the above and together with a few horse-hairs. A piece of maroon-colored worsted is woven around two-thirds of the brim; and the bottom and outside are entirely covered with one kind of moss that grows on damp rocks (piece inclosed).

Next No. 2 was taken with its complement of 4 eggs on June 25th, 1889. It was built by the same pair of birds as the preceding. The eggs measure, respectively, ~~18.8 x~~ 18.8 x 15.1; 14.8 x 19.4; 18.4 x 15; 19.4 x 14.8. The nest is 75 high by 130 in greatest width. Inside depth 35; inside diameter 93. This nest is much like the last but is strongly fortified with mud, forming a rim around the outer border, the soft material reaching the bottom in the centre. Cow-hairs are largely used in the lining.

August 20th, 1889. H. Snelling, Minn.

No. 6681. Dolichonyx oryzivorus ♂ ad. A few black feathers in neck. 192; 318; 103; 72; tarsus, 16; mid. toe, 10.7; culmen, 17; gape of bill to centre of pupil, 22.5; occiput, 35.5; base of bill to occiput, 23; height of bill, 11; width of bill, 10.5; diameter of eye, . Femur, 41; tibia, 27; wing, 99; mt., 22; cl., 8.5; tarsus, 23; cl., 11; inner cl., 6.1; outer cl., 6; graduation of tail, 9. Irides, dark brown. Bill brown at base of maxilla and sides of mandible at base, shading to blackish at tip of maxilla; mandible flesh-color below, becoming bluish-gray towards tip, the extreme point being dusky. Tarsi & feet, brown; claws brown at base, shading to blackish at extremity. In full song when shot. An old bird in full fall dress.

August 29th, 1889. H. Snelling, Minn.

To-day I went up the Minnesota River seven (7) miles in a steam launch, stopping frequently to shoot Jack Snipe (Gallinago wilsoni), which were plentiful. Rails (Porzana carolina and Rallus virginianus) were abundant, as were Coots and Florida Gallinules (Fulica americana and Gallinula galeata). Herons were quite numerous (A. A. herodias et virescens). In the Cat-tails and wild rice were thousands of Agelaius phoeniceus, but the Yellow-heads (X. xanthocephalus) seem all to have deserted. A few Icterus are still here and Coleoscoloplagus ferrugineus is coming into the post.

Telmatodytes palustris is still here.

Passerculus savannae is common in the marshes.

Zonotrichia albicollis.—White-throated Sparrow is beginning to migrate now.

Astragalinus tristis still in summer dress for the most part.

Zamelodia ludoviciana very numerous.

Ampelis cedrorum abundant.

Contopus virens and C. borealis are common.

Geothlypis trichas and G. philadelphia are very numerous, the latter frequenting both low ground & uplands, while the former resorts almost exclusively to the marshes and river-bottoms.

Mniotilta varia.—Common now.

Sitta carolinensis.—Abundant.

Picus pubescens.—Abundant. Picus villosus more rare.

Colaptes auratus.—In flocks.

Myiarchus crinitus.—Still abundant.

Tolmiaus flaviceps.—A lesser Yellow-legs was seen in a muddy tarn hole in the city of Minneapolis on Aug. 27th.

Myiarchus crinitus still here—whistling.

Trochilus colubris.—Very numerous about the snapweeds bordering river marshes (Impatiens fulva).

Spinus tristis.—Very plentiful in all wet spots.

Botaurus lentiginosus.—Bitterns common; one shot.

Melanerpes erythrocephalus.—None have been seen for some weeks. Was very abundant everywhere during breeding season.

(August 29th, 1889 — Concluded.)

Icterus galbula. - Still common.
Turdus mustelinus. - Common.
Turdus fuscescens? - Heard with a harsh, jay-like note.

6682 Ceothlypis philadelphia ♂ juv.
~~6683~~ 6683 Ardea virescens ♂ juv. young of the year.
~~6684~~ 6684 Ardea virescens. ♂ ad. Length to end of claws, 610
480; 705; 197; 75. Culmen 64; at nostril, 53
Gape, 81; height of bill at base, 13; width of bill at base, 14
Tip of bill to centre of pupil, 83; to occiput, 114
base of culmen to occiput. 48. Diameter of eye, 8
Head of tibia to end of claws, 190 Tibia 84 Bare portion, 27.
Tarsus 54 Mte 56 Mt. 47 Htc, 39; hind cl. 12.5
inner cl. 9 middle cl. 10 outer claw. 8.
Weight, 6 oz. 0 dr. Irides yellow. Bare skin of eye + face greenish-yellow. Bill blackish above and along the edge of mandible especially at base and tip. Greater part of mandible and edge of middle part of maxilla yellowish. Tip greenish-yellow. ~~Man~~ Mucaceous anteriorly. Dorsum of toes olive; beneath yellow.
A fine adult bird with good back plumes.
Length of occipital plumes, 70. A frog (full grown) in stomach.

September 6th, 1889. Ft. Snelling, Minn.

~~6687~~ 6685 Porzana carolina ♀ juv. An old soldier at the Minnesota Soldiers' Home, at Minnehaha found it lying beneath some telegraph wires, and picked it up and brought it into the Post for me. It had struck the telegraph wire and moulted some feathers off the lower part of its neck.

A Virginia Rail was picked up beside the Post Canteen a few days previous, it having flown against a light and killed itself. Rails do this sort of thing very frequently during their nocturnal flights.

Nycticorax nycticorax. - Rob. Hannay shot a young one.
Melanerpes erythrocephalus. - Several seen to-day.

Sciurus carolinensis. ♀ ad.

Sept. 20, 1889. Near Osseo, Minnesota. Total length 570 Head and body, 264. Tail, vert. 239; hairs, 329; width, 140. Ears, height above crown 25; above notch, 33; width, 24. Chest girth, 143. Distance between eyes, 35. Diameter of eye, 9.2. Tip of nose to front teeth, 9.5; to angle of mouth, 29; eye, 31.5; centre of pupil, 39; ear, 54; meatus, 56; tip of ear, 88; occiput, 70; end of hind leg 425. Fore limb from coracoid, 130; from olecranon 97; length of manus, 47; width, 14. Claws of manus: 1st (inner), 7.5; 2nd, 8.5; 3rd, 8.7; 4th, 7.8. Hind limb from great trochanter, 189; Knee, 134. Length of pes, 72; width, 16.5. Claws of pes: 1st (inner) 7; 2nd, 8; 3rd, 8.8; 4th, 9.5; 5th, 8.5. Longest whiskers, 77.

Belly reddish on the sides, with a distinct reddish line down the centre, with a broader white band on each side of it commencing a little behind the fore limbs. (Skin + skull)

Helminthophila ruficapilla. - Several shot by a creek.
Dendroica coronata. - Several - first seen this fall.
Zonotrichia albicollis. - Several - first seen this fall.
Junco hiemalis. - First seen this fall.
Regulus calendula. - First seen this fall.

Cariacus macrotis. - The larva infesting the nasal cavity of the Mule Deer is, possibly, of the family Oestridae, Oestrus ovis, Linn., that infests the nasal cavity of the sheep. Another species (Hypoderma tarandi) infests in like manner the Reindeer. The tick so common on the Deer's Ears is Ixodes bovis ("Western Cattle Tick").

Specimens sent to the U.S. Army Medical Museum:—

Sciurus sylvaticus arizonae. — Four (4) foetuses in utero. March 22, 1886. Fort Verde, Arizona.

Lepus ~~sylvat.~~ texianus. — A foetus. Ft. Verde, Ariz. 188.

Tamias harrisi. Spec. of embryology. Fort Verde, Arizona, March 20, 1886.

Castor fiber canadensis. Uterus (containing 3 foetuses), bladder and ovaries. Ft. Verde, Arizona. February 10, 1887.

Measurements of eggs of Bonasa umbellus, taken at Mendota, Minnesota, 1888; — 39.40 X 29.60; 39.00 X 30.00; 40.00 X 30.10; 38.50 X 29.60; 40.00 X 30.20; 39.60 X 30.00; 39.00 X 30.40; 40.30 X 30.00

6667	Geothlypis trichas. ♂ ad.	May 30, 1889.	Measurements on Table:	Fort Snelling, Minn.	
6668	Helminthophila chrysoptera ♂ ad.	June 3, 1889.	Meas. on Table.	do	
6669	Spiza cyanea. ♂ ad.	do	do	do	
6670	" " ♀ ad.	do	do	do	
6671	Vireo gilvus. ♀ ad.	do	do	do	
6672	Piranga erythromelas. ♂ ad.	do	do	do	
6673	Ægialitis vociferus. ♀ ad.	do	do	do	
6674	Xanthocephalus xanthocephalus. ♂ ad.	do	do	do	
6675	Myiarchus crinitus ♀ ad.	do	do	do	
6676	Pœcilus pubescens. ♂ ad.	do	do	do	
6680	Melanerpes erythrocephalus. ♀ ad.	Mora, Minn.	June 17, 1889.	measurements on Table.	
6678	Colaptes auratus. ♂ ad.	do	Meas. on Table.	do	
6679	Colinus virginianus. ♂ ad.	do	do	do	
6677	Sitta carolinensis — ~~juv.~~?	Fort Snelling.	Not measured.	June 3, 1889.	
6682	Geothlypis philadelphia ♂ juv.	Aug. 29, 1889.	Ft. Snelling, Minn.		
6683	Ardea virescens. ♂ juv.	do	do		
6684	" " ♂ ad.	do	do		
6685	Porzana carolina. ♂ juv.	Sept. 6, 1889.	do		
6681	Dolichonyx oryzivorus. ♂ ad.	Aug. 20, 1889.	do		

A List of the Birds' Eggs and Nests of birds from Minnesota left at the American Museum:—

6686	Sitta carolinensis ♂ ad.	Ft. Snelling, Minn.	March 5, 1890.	
6687.	" " ♀ ad.	do	do	

A List of the Mammals collected while at Fort Snelling, Minnesota to January 1st, 1890.

No.					
750	Fiber zibethicus	♀ ad (Skull only.)	March 13, 1889.	Fort Snelling	Minnesota
751	" "	♀ (ad.?)	do	do	do
752	" "	♀ ad.	do	do	do
753	" "	♀ ad.	do	do	do
754	" "	♂ ad. (Skin & Skull)	May 9, 1889.		do
755	" "	♂ ad. (Skull only.)	March 13, 1889.		do
756	" "	♀ ad.	do	(defective broken) do	do
757	" "	♂ ad.	do	do	do
758	" "	♂ ad.	do	do	do
759	" "	♂ ad.	do	do	do
760	" "	♀ ad.	do	do	do
761	" "	♂ ad.	do	do	do
762	" "	♂ ad.	do	do	do
763	" "	♀ ad.	do	do	do
764	" "	♂ ad.	do	do	do
765	" "	♀ ad.	do	do	do
766	" "	♀ ad.	do	March 19, 1889	do
767	" "	♀ ad.	do	do	do
768	" "	♀ ad.	do	do	do
769	" "	♂ ad.	do	do	do
770	" "	♀ ad.	do	do	do
771	" "	♂ ad.	do	do	do
772	" "	♂ juv.	do	do	do
773	" "	♀ ad.	do	March 22, 1889	do
774	" "	♀ ad.	do	do	do
775	" "	♀ juv.	do	do	do
776	" "	♀ juv.	do	do	do
777	" "	♀ ad.	do	(defective broken) do	do
778	" "	♀ juv.	do	do	do
779	" "	♀ juv.	do	do	do
780	Tamias striatus ornatus.	♀ juv. (Skin & Skull inside.)	July 5, 1888.		do
781	Spermophilus tridecemlineatus	♀ ad.	do	Aug. 2, 1888.	do
782	" "	♂ juv.	do	do	do
783	" "	♂ juv.	do	do	do

784	Lepus s. sylvaticus.	♂ ad. (Skin & Skull.)	Sept. 6, 1888.	Ft. Snelling	Minn.
785	Sciurus h. hudsonius.	♂ ad.	do	March 4, 1889.	do
786	" " "	♀ ad.	do	March 5, 1889.	do
787	Arctomys monax.	♂ (Skull only.)	March 23, 1889.		do
788	Lepus s. sylvaticus.	♂ ad. (Skin & Skull)	do		do
789	Sciurus h. hudsonius.	♂ ad.	do	do	do
790	Sciuropterus volucella.	♀ ad. Weight 1150 grs.	March 30, 1889.	(Skin.)	do
791	Tamias striatus ornatus.	♀ ad. Weight 1800 grs. Contained fetus (5) fœtuses.	Apr. 2, 1889	(Skin.)	do
792	Lepus s. sylvaticus.	♀ ad. (Skin and Skull.)	Apr. 5, 1889.		do
793	Tamias striatus ornatus.	♀ ad. Contained 4 fœtuses (Skin.)	April 13, 1889.		do
794	Spermophilus tridecemlineatus.	♂ ad.	April 14, 1889.		do
795	" "	♂ ad.	do		do
796	" "	♀ ad.	do		do
797	" "	♂ ad.	April 15, 1889.		do
798	" "	♂ ad.	do		do
799	" "	♂ ad.	do		do
800	Geomys bursarius.	♂ ad. (Not preserved.)	April 16, 1889.		do
801	Sciurus h. hudsonius.	♂ ad.	April 19, 1889.		do
802	" " "	♂ ad.	Skull in skin	April 26, 1889.	do
803	Spermophilus franklini.	♂ ad. (Skin & Skull.)	May 2, 1889.		do
804	Spermophilus tridecemlineatus	♀ ad. (8 fœtuses)	do		do
805	Putorius ~~ermanea~~ vison.	— ad. Skull found on Pike's Island	1889.		
806	Arctomys monax.	♂ ad. (Skin and Skull)	May 14, 1889.	Ft. Snelling	Minn.
807	" "	♀ ad.	do	May 16, 1889.	do
808	" "	♂ ad. (Skull only)	May 24, 1889.		do
809	" "	♂ ad	do	June 1, 1889	do
810	Procyon lotor.	♂ ad. (not preserved.)	June 13, 1889.		do
811	Lepus americanus.	♂ juv. (Skin + Skull.)	Moorhead, Minnesota	June 15, 1889.	do
812	Putorius ermanea.	♂ ad. (Skin	Belly white.	June 25/89.	Snell.
813	" "	♀ juv. (Skin	" yellow.	July 10, 1889.	"
814	Scalops aquaticus argentatus.	♂ ad. (Skin + Skull.)	July 13, 1889.		"
815	Putorius ermanea.	♂.	July 13, 1889.		"
816	Sciurus c. hypophœus.	♀ ad. (Skin + Skull)	Sept. 20, 1889.	Cat. Hall	
817	Thomomys bursarius	♀ ad. (Skin + Skull)	Oct. 27, 1889.	Ft. Snelling	

[Continued on page 82.]

Shells collected at Delaware Water Gap, Pa., Dec. 19 1889:— Triodopsis tridentata, Say; Mesodon albolabris, Say; Mesodon thyroides, Say; Succinea obliqua, Say; Stenotrema monodon Rafinesque. These were all identified & Published by Dr. [illegible]

(There are lists of skulls on page 225.) 1.29

Shells collected at Highland (opposite Poughkeepsie), Ulster County, N.Y., Dec. 22, 1889: —

Mesodon albolabris (several spp. one living, a tooth [illegible] of Mr. Anderson Smith;

" Bidentata. — Common under stones in woods.

" 2 fuliginosa, Gray. — Common.

Patula alternata, Say. — Common.

Stenotrema hirsutum. — Common.

671.	Sciurus aberti, Woodhouse.		♂ ad.	Aug. 10, 1887,	Weber Creek, Utah		
672.	"	"	"	"	"		
673	"	"	"	"	"		
[illegible]	"	"	"	"	"	do	do
675.	"	"	"	♀ ad.	Aug. 15, 1887.	Baker's Butte, Arizona.	do
676.	"	"	"	♂ ad.	"	do	do
677.	"	"	"	♀	"	do	do
678.	"	"	"	♀	"	do	do
679	"	"	"	♀	"	do	do
680	"	"	"	sex ?	Aug. 22, 1887.	do	do
681	"	"	"	"	do	do	do
682	Sciurus arizonensis.		♀ ad.	Aug. 11, 1887.	Weber Cr. Utah T.	Ariz.	do
683	Spermophilus G. grammurus.		(?) ad.	Cliff Dwellg,	Ft. Verde	Ariz	do
684	Tamias lateralis.		♀ juv.	Aug. 21, 1887.	Baker's Butte,	Ariz.	do
685	Tamias quadrivittatus.		♀ ad	June 14, 1887,	San Francisco Mts,	Ariz.	do
686	~~Urocyon cinereo-argentatus~~ Canis latrans		♂ ad.	~~June, 1887.~~ February 16, 1888	~~Ft.~~	Ft. Verde	do
	~~Skull without one molar, picked up in Ft. Verde.~~						do.
687	Canis latrans.		♂ ad.	March 11, 1888.	Ft. Verde,	Ariz.	do
688	Felis concolor.		♀ ad.	Febr. 13,	~~Dec.~~ ~~January 19,~~ 1887. (Jordan)	do	Complete Skeleton
689	"	"	♂ juv.	Dec. 19, 1887.	Verde River,	Arizona	Skull only
690	"	"	♀ juv.	Jan 3, 1888		do	do
691	"	"	♀ yg. ad.	Jan 17, 1888		do	do
692	"	"	♀ yg. ad.	Jan 30, 1888		do	do
693	"	"	♂ juv.	Febr. 24, 1888		do	do
694	Lynx maculatus		♂ ad.	~~Febr.~~ Dec. 23, 1887		do	do
695	"	"	♀ ad.	Dec. 29, 1887		do	do
696	"	"	♀ ad.	Jan. 7, 1888		do	do
697	"	"	♀ ad.	Febr. 13, 1888		do	do
698	Taxidea		♂ ad.	Febr. 3, 1888.	Ft. Verde,	Ariz.	Imperfect skull Skin in pickle

	Zoo Mus. No. 1889				
699	Mephitis	ad.	March 6, 1888.	Ft. Verde, Ariz.	No skin
700	(1893) "	im.	March, 1888	do	do
701	(1891) "	~~ad.~~	do	do	do
702	(1898) "	im	do	do	do
703	Lutra	♂ ad.	Febr. 13, 1888.	do	do
	American Mus., No. 1937				

April

[Continued from page 79]

818 Lepus melanotis. ♂ad. No. 2420 Am. Mus. Nat. Hist. Jan. 10, 1890. near Independence, Nebraska
819 " " ♂ad. No. 2421 Am. Mus. Nat. Hist.

820 Mus decumanus ♂ ~~juv.~~ ad. Room H, Am. Mus. Nat. Hist. January 20, 1890.

821 Lepus melanotis ♂ ad. Type No. 2422 Amer. Mus. Nat. Hist. Jan. 27, 1890. N. Y. Market

822 Lepus sylvaticus ♀ad. Ft. Snelling, Minn. Apr. 1, 1890. See p. 99.
823 Sciurus hudsonius ♀ad. do do do
824 " " ♂ad. do do do
825 ~~Tamias~~ hudsonica ad. Mammoth Hot Springs, Yellowstone National Park, Wyoming Ter. August, 1889. Skull found.
826 Sciurus hudsonius ♀ad. Ft. Snelling, Minn. April 4, 1890. Skin & Skull
827 ~~Tamias lysteri~~ ♂ad. April 8, 1890. Ft. Snelling, Minn.
828 Lepus sylvaticus. ♀ad. April 10, 1890. do.
829 Geomys bursarius. ♂ad. April 15, 1890 do
830 Spermophilus tridecemlineatus. ♂ad. do
831 " " ♂ad. do
832 " " ♀ad. do
833 " franklinii ♂ad. April 20, 1890. do
834 " " ♀ad. April 25, 1890. do
835 Tamias striatus lysteri. ♀ad. May 5, 1890 do
836 Geomys bursarius. ♀ad. May 10, 1890. do
837 Lepus sylvaticus. ♀ juv. May 15, 1890. do
838 Arvicola ♀ juv. May 17, 1890 do
839 Arctomys monax. ♂ad. June 3, 1890. do Not skinned.
840 Geomys bursarius. ♂ad. June 8, 1890. do
841 " " ♂ad. June 10, 1890 do
842 Spermophilus franklinii. ♂ juv. (young of the year) June 17, 1890. do
843 Spermophilus tridecemlineatus. ♂ juv. do June 18, 1890. do
844 Sciurus hudsonius. ♂ad. July 12, 1890. Camp Douglas, Juneau County, Wisconsin
845 " " ♂ad. do do
846 Tamias quadrivittatus neglectus. ♀ad. July 15, 1890 (suckling young) do
847 Tamias striatus (lysteri?). ♀ad. July 16, 1890 (" ") do
848 Sciurus carolinensis hypophoeus. do ♀ad. do July 16, Suckling young. Camp Douglas, Wisconsin
849 " " " (Progeny of No. 848.) do
850 Tamias quadrivittatus neglectus. ♂ juv. July 18, 1890. do
851 " " " ♀ad. do do

(Continued on page 136.)

Taxidea americana berlandieri. ♂ad. Ft. Verde, Ariz. Feb. 3, 1888. Total length, 740; head and body, 590; tail vert. 152; tail to end of hairs, 197; tail, width outspread, 150. Ears, height above crown, 40; above notch, 55; width, 60; diameter of eye, 8; girth of chest, 340; longest whiskers, 38; between eyes, 37; from tip of nose to front teeth, 21; to angle of mouth, 60; to eye 54; to centre of pupil, 60; ear, 108; meatus, 116; tip of ear, 158; to occiput, 148; end of outstretched hinder extremity, 745; Fore limb, from coracoid to end of longest claw, 239; from olecranon, 182; manus, length, 103; manus, width, 43; claws of manus: 1st (inner), 29; 2nd, 31; 3rd, 29; 4th, 29; 5th 25. Hind limb, from great trochanter to end of longest claw, 240; from patella to end of longest claw, 171; pes, 110; width of pes, 35; claws of pes: 1st (inner), 13.5; 2nd, 11.5; 3rd, 13; 4th, 15; 5th, 11.5. Weight 11 pounds Avoirdupois. Upper canines from gums, 13; lower canines from gums, 12.

6016. Glaucionetta clangula americana. ♂ad.
No wing bar. Gloss on head greenish. Bill, uniform plumbeous-black; legs and toes, brownish orange; claws, dark brown; webs, dusky. Iris yellow.
Head all sound black, with green metallic reflections. A white loral patch of irregular ◇ trapezoidal form, touching base of bill from a little below commissural angle to more than half way to ? end of ? process. Inner scapulars black; outer white, with black outer edges. The inner = most white feathers are black on both edges, a white stripe occupying the centre of the feathers including their shafts. Inner and outer portions of upper side of wing black, the middle portion, except in front, being occupied by a broad white band. The primaries and tertiaries are glossy black throughout; but the coverts are more or less edged ~~with~~ or spotted with white at tips. The white "mirror" is formed by ~~several~~ seven inner secondaries, the

innermost being sharply divided into a white outer and black inner web. The neighboring greater & middle wing coverts also contribute to the solid white wing band, although the concealed bases of the former are black. The lining of wings black with many of its coverts spotted white at tip. The neck all round, breast and abdomen, are snowy white, as are the sides anteriorly; behind the feathers of sides are prolonged into elongated and pointed, black-edged plumes which cover the tibiae. A dusky band extends across the crissum, of mingled white and blackish, produced by a commingling of the black bases and white tips of the feathers. Under tail-coverts white at base, shotted slightly with dusky towards the tips of the longest feathers. Sides black posteriorly. Tibiae with elongated black plumes on outer side; more ashy, and spotted with white internally.

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Note on Vulpes velox. No. 2497 (my no. 193) from between Maricopa and Gila, Arizona has the entire belly reddish brown, this color extending forward in the median line as far as the fore limbs. The ears in the skin measure 66 mm. from notch; their outside (convexity) being uniform yellowish rufous, with little or no lining with black. There is an incomplete black band across the jaw near its end, and a broad band of black along the edge of the jaw extending around the angle for a considerable distance on to the upper jaw. The colors are paler and more rufous than in a Colorado specimen (No.) which differs in having shorter ears (from notch 51 mm), lined with black on their convex surface, especially toward the tip; lower jaw with only a small spot of sooty black on its side about the middle. Below there is no brownish-red whatsoever, being white or very pale yellowish. The pes measures 32 mm. longer in the Colo. specimen.

Copied & incorporated April 6, 1897

Fort Snelling, Minn. March 28, 1890.

My Dear Dr. Fisher:

I mail you herewith a tabular statement of the contents of the stomachs of all of the Birds of Prey that I have collected, of which the following is a summary: — [see next page.]

I have given you all of the data entered in my note-books where the specimens are recorded, with their measurements, colors of soft parts, etc.; but there may be items concerning some of these specimens scattered through the notes of the days' trips, which have escaped me, as most of my notes are not yet indexed.

Of course I have made many entries concerning the food of Hawks and Owls, which are not noted on the table sent you, for the reason that the specimens were not shot, dissected and preserved. These are entered and indexed as often under the head of the species preyed upon. It would be a month's work to collect all of these notes; but if you want them let me know.

Sincerely yours,
Edgar A. Mearns.

Summary of Stomachs of Birds of Prey [illegible] the data was sent to Dr. A. K. Fisher.

Cathartes aura	7
Circus hudsonius	10
Accipiter velox	23
Accipiter cooperi	18
Accipiter atricapillus	3
" " striatulus	2
Parabuteo unicinctus harrisi	1
Buteo borealis	41
" " calurus	58
Buteo abbreviatus	4
Buteo swainsoni	10
Buteo latissimus	11
Archibuteo lagopus sancti-johannis (Ngubingia anthracina)	1
Archibuteo ferrugineus	1
Aquila chrysaëtos	1
Haliaëetus leucocephalus	8
Falco mexicanus	5
Falco peregrinus anatum	11
Falco columbarius	4
Falco richardsoni	1
Falco sparverius	43
Polyborus cheriway	1
Pandion haliaëtus carolinensis	7
Strix pratincola	8
Asio wilsonianus	5
Asio accipitrinus	1
Syrnium nebulosum	1
Nyctale acadica	4
Megascops asio	16
" " trichopsis	12
Bubo virginianus	3
Bubo virginianus subarcticus	26
Nyctea nyctea	2
Speotyto cunicularia hypogaea	6
Glaucidium gnoma	3
Glaucidium phalaenoides	1
Total	327

Vultures — 7
Hawks & Eagles, etc. — 232
Owls — 88
Total — 327

Sphyrapicus varius nuchalis No. 3406 Ft. Apache, has the red of throat occupying most of the ordinarily black patch on breast & much of the black patch on side of head behind eye & white stripe below eye. Approaches ruber.

Sphyrapicus thyroideus. No 55744 ♂ July 23, 1887, Baker & Bartle differs strikingly from my other two males, having no white on wing quills, the broad bands on secondaries much reduced and also the white stripes on head are narrower. Red of throat darker. Belly sap green instead of lemon yellow as in the other two males both of which are fall specimens

Chordeiles acutipennis texensis is distinguishable from Texan specimens, by the coarser spotting, more ochraceous and whitish markings in the latter (Texan), as compared with examples from Arizona, the Texan specimens being more frosted in appearance.

Empidonax difficilis is much paler, more grayish than specimens from western Mexico, the latter is a pure olive above, yellower below, with an ochraceous tint on the breast. The ~~bill~~ maxilla is brown in Mexican spec. & blkish in Arizona.

[illegible] secondaries [illegible] 3 feet [illegible]
The narrowest front is a Mexican spec., having the secondaries still frosted with of pure white
The next narrowest a New Mexican spec., from Fort Bayard, Mar. 12, 1862, having a trace of brownish suffusion on inner edge of tail feathers
The next narrowest is a Ft. Dudley Mexican spec. having the most trace of brownish in inner edge of wing. The 5 specimens are Rio Grande, New Mexico, Arizona & Mexican W. Mts. spec. [illegible] 23, 1861.

The extent of white on inner webs of tertials & secondaries & tail feathers simply a matter of age, the softer, fresher adult feathers showing more white, the older worn feathers in the dried specimens being adult.

List of Alcoholics sent to the Smithsonian.

"Fishes from Arizona; and Reptiles and Batrachians, including specimens of Pityophis, Rana, Hyla, Crotalus, Crotaphytus collaris, Sceloporus Clarkii, and Phrynosoma Douglassii."
(accession No. 20,877.)

Scotia Young Carnivorus v. lowesi
Nos. 1369 + 1370 not sexed or dated. Above russet
fawn color, with two central + several lateral
rows of white spots. The two central (one on each
side of the vertebral column, are regular, begin
at the crest of the ears as stripes, become spots
on the neck. Along the back these pure white
spots are surrounded by white hairs. The lateral
white spots are not surrounded by black hairs
and ~~are irregular~~ rows are irregular, being
more numerous on the outside of hips (or thighs).
The reddish color of the back deepens into bright
russet on the top of the tail, on the sides it fades
to a pure fawn color along the edge of the belly
which is white + on the remaining sides of limbs down
to knee + heel joints, under side of tail, chin +
throat + inside of ears. The sides + front of neck, and the chest
are mixed gray, white, and tawny. The outer
sides of limbs are russet fawn color with some
black in front. Hoofs black tipped with
horn-color. Some white spotting around hoofs,
which are black tipped with horn color. The top of
head + dorsum of ears are grayish mixed with
dusky brown. Eyelashes jet black

Uephitis estor, Merriam. — The series before me embraces
the following: unknown localities (2); Mass. (1); New-York (3); Pa. (1);
Ohio (1); Georgia (1); Fla. (1); Louisiana (1); Minnesota (2);
Iowa (1); Indian Terr. (1); Dakota (2); Kansas (2); Nebraska (2);
Wyoming (5); ~~California~~ Colorado (3); Utah (1); British Columbia (1);
Washington (3); California (4); Arizona (30); Texas (4);
Mexico (2). Total 74 skulls.

Of this series (74 skulls), the only ones lacking the first
upper premolar are as follows: No. 1914, Ft Verde, lacks it
on right side; No. 1997, Ft Verde lacks it on left side; No. 605,
Fort Bowie, Ariz., lacking on both sides (looks as if they had fallen
out, leaving a space); No. 1911, Ft Verde, lacks on both sides, but
no space.

Gray Fox No. 1343 Am. Mus. Coll. ♂ Yg. ad.
Prescott, Ariz., Oct. 28, 1884. Wed. Sent.

Above the hair is gray throughout, except upon the forehead,
where it has a faint fulvous tinge. In Eastern Spec.
it is quite strongly tinged with fulvous over the whole
dorsum except at the base, where it is fulvous. The
Ariz. spec. is grayer throughout, having the fulvous tinge
pale yellowish instead of chestnut-fulvous. The
tail longer. Ears longer + more pointed. The Ariz. has
the tail tricolor — sides a fine gray, tip black, median
below pale yellowish fulvous. Whole tip of tail black,
most of the long hairs forming its extremity being black throughout.
In the eastern the gray of the sides is largely mixed
with fulvous especially towards the extremity, the hairs
forming the extremity only being black for their terminal
three fifths. The Ariz. animal's tail is gray, tipped
with black, median below yellowish fulvous below.
The Ariz. has the whole of lower jaw black, curving around
the commissure, and extending forward as a narrow
marginal band, as far as the whiskers where the whole
sides of the muzzle become black (as are the whiskers) except
a small white spot adjoining the nasal pad.

The back is a fine heavy gray, the under
fur being gray, the long coat black ~~&~~ with broad
white? or silver-gray subterminal annulations; toward
the side the black drops on having gradually decreased + the
ear becomes paler + grayer.

[illegible] lower half of back, [illegible] a large
patch on the middle of chest — the belly [illegible]
white. Conspicuous patch on neck (on [illegible]
[illegible]), edge of back + hind quarters, [illegible]
[illegible] fulvous, blended on base of ears. Face
[illegible] with brownish from the hump to the [illegible].
Chest + inner sides of limbs strongly fulvous.
In the eastern specimen there is more white [illegible]
of the muzzle, lower jaw + also [illegible]. More
in the Arizona specimen [illegible] the latter has the outer
side of limbs mixed [illegible] + fulvous; with no [illegible]

Fabulae — Part of Fishes returned by Bean
Clupea vernalis Mitch. Hudson R. at Newburgh Jd. No. 85.
Eumesograpsus simulans, Gill & Jordan. Long Pond,
Orange Co., N.Y. Nos. 15975.161. I had labeled it "E. margaritis"
Amiurus albidus (Le Sueur). 122 "Lake Cat fish." Hook-
tailed Catfish. Hudson at West Point. Jan. 5, 1876.
"Small" Lepomis gibbosus (= Eupomotis aureus) "(Bean.)

Lantz's Vulpes macrotis has a fulvous coat,
with gray annulations on the entire upper surface
from base to tail. In mine they are worn,
& of a color a little richer than mine, and
the belly white, yellowish without any of
the chestnut color that mine has;
Otiscus trisis feliciae, subsp. nov.
type. No. 6311 ♂ad., in breeding dress, Ft. Verde, Ariz.,
May 3, 1888; No. 5957, ♂ad., in winter dress, Ft. Verde, Ariz.,
Jan. 28, 1888; No. 4342, ♀ad. in winter dress, Ft. Verde,
Ariz., Dec. 23, 1885.
The male has the bill, as a function of age,
dark, the general color somewhat fuller. The white tips
of the wings invariably the white tips of the greater and
middle coverts are considerably broader; the secondaries
are more broadly edged with white, as are the rectrices,
whose inner webs also are more largely occupied
by white. There is a good deal more white on
the crown. The black cap is larger.
The female birds differ from the eastern [illegible]
[illegible] much more
[illegible] all white in place of the
differ in plumage [illegible]
[illegible] Ft. Verde. See Ibis [illegible] 1889 [illegible]

March 10, 1890. Fort Snelling, Minn.

6688	Calcarius lapponicus		♂ad.	March 10, 1890, Ft. Snelling, Minn.
6689	"	"	♂ad.	do
6690	"	"	♂ad.	do
6691	"	"	♂ad.	do

In the above specimens the irides are dark hazel. Bill yellowish brown, tipped with dusky. Tarsi, feet and claws, black.

6692	Plectrophenax nivalis		♂ad.	March 10, 1890, Ft. Snelling, Minn.
6693	"	"	♂ad.	do
6694	"	"	♂ad.	do
6695	"	"	♂ad.	do
6696	"	"	♂ad.	do
6697	"	"	♂ad.	do

The above six specimens have the iris brown. Bill yellow, with a narrow blackish tip above and below. Legs, feet and claws black.

6698	Plectrophenax nivalis		♀ad.	March 10, 1890, Ft. Snelling, Minn.
6699	"	"	♀ad.	do
6700	"	"	♀ad.	do
6701	"	"	♀ad.	do

The above four specimens have the iris, bill & feet like the males, except that there is a little more dusky at the tip of the bill. The female has the shoulder black, the feathers being edged with white; but in the male the shoulder is pure white.

6702	Otocoris alpestris (towards praticola)		♂ad	March 10, 1890. Ft. Snelling.
6703	"	" praticola.	♂ad.	do
6704	"	"	♂ad.	do

In the above three specimens the irides are hazel. Bill with maxilla plumbeous black, mandible bluish horn-color at base shading to bluish gray at tip. Tarsi & feet brownish black with a purplish tinge. Claws dusky plumbeous

6705	Acanthis linaria		♀ad.	March 10, 1890, Ft. Snelling, Minnesota.
6706	"	"	♀ad.	do
6707	"	"	♀ad.	do
6708	"	"	♀ad.	do
6709	"	"	♀ad.	do

Bill yellowish brown above, yellow below, with a black line at tip of maxilla & mandible. Irides hazel. Legs feet & claws black.

March 12, 1890. Ft. Snelling, Minn.

6710 Cyanocitta cristata ♀ ad. Not measured.

March 17th, 1890. Ft. Snelling, Minn.

6711	Calcarius lapponicus.		♂ ad. ~~Three~~	Not measured.
6712	"	"	♂ ad.	do
6713	"	"	♂ ad.	do
6714	"	"	♂ ad.	do
6715	"	"	♂ ad.	do
6716	"	"	♂ ad.	do
6717	"	"	♂ ad.	do
6718	"	"	♀ ad.	Measurements on Table.
6719	"	"	♀ ad.	do
6720	"	"	♀ ad.	do
6721	"	"	♀ ad.	do
6722	"	"	♀ ad.	do
6723	Lanius borealis ♀ ad.			do

Iris hazel. Legs, feet + claws, plumbeous-black. Bill plumbeous, flesh-color at base of mandible. Stomach contained bones + hair of adult meadow mouse! Arvicola

March 18th, 1890. Ft. Snelling, Minn.

6724	Acanthis linaria		♀ ad.	Measurements on Table.
6725	Coccothraustes vespertina		♂ ad.	Not measured.
6726	"	"	♂ ad.	do
6727	"	"	♂ ad.	do
6728	"	"	♀ ad.	do
6729	"	"	♀ ad.	do
6730	"	"	♀ ad.	do

The bill in the above six Evening Grosbeaks varies from pale greenish yellow to apple-green or sap-green. The finest plumaged male has the greenest bill, and a female the yellowest.

Spring Notes.—

Fort Snelling, Minn. March 18th, 1890.

I left Fort Snelling, on leave of absence, Oct. 31st, 1889 and returned February 28th, 1890. The following species were noted on or soon after our return to Snelling.

Calcarius lapponicus.— In cultivated prairie country.

Plectrophenax nivalis.— In large flocks; commonly seen.

Coccothraustes vespertina.— In flocks, feeding on box elder seeds in the city of Minneapolis.

Acanthis linaria.— Common everywhere. No males seen. In Minneapolis we saw them eating the maple buds.

Otocoris alpestris.— A male (not typical) shot March 10th.

Otocoris alpestris praticola.— Common in pairs; no flocks; first seen singing in the air, soaring high, on March 17th.

Corvus americanus.— None seen until March 10th, when several ~~were~~ were noted, and a few every day since then.

Sitta carolinensis.— Common.

Parus atricapillus.— Common in small flocks.

Certhia familiaris.— A few.

Picus pubescens } One or two of each
Picus villosus }

Passer domesticus.— Common in St. Paul.

Bonasa umbelus.— A few on the reservation.

Cyanocitta cristata.— Common; not abundant.

Lanius borealis.— First seen March 17th. It whistled curiously like a heavy gate on a rusty hinge, at times varying it with whimsical modulation. Before seen.

Spizella monticola.— First seen March 11th; a single one in swamp of cat-tails under the fort, in a sheltered place; several seen in same place March 16th; and the first flock, on higher ground March 18th.

Junco hyemalis.— First seen March 17th; small flock in manure heaps in fort garden.

March 21st, 1890. Fort Snelling, Minn.

6731	Plectrophenax nivalis.		♂ ad.	Measurements on Table.
6732	"	"	♂ ad.	do
6733	"	"	♂ ad.	Not measured.
6734	"	"	♂ ad.	do
6735	"	"	♀ ad.	Measurements on Table.
6736	"	"	♀ ad.	do
6737	"	"	♀ ad.	do
6738	"	"	♀ ad.	do

6739 Lanius borealis ♂ ad Measurements on Table.
Stomach contained hair, skull & skeleton of meadow mouse (Arvicola minor).
Smaller than No. 6723, but certainly determined to be a male in adult plumage.

6740	Otocoris alpestris	praticola.	♂ ad.	Measurements on Table.
6741	"	"	♀ ad.	do
6742	"	"	♂ ad.	do

6743	Calcarius	lapponicus.	♀ ad.	Measurements on Table.
6744	"	"	♀ ad.	do
6745	"	"	♂ ad.	Not measured.
6746	"	"	♂ ad.	"
6747	"	"	♂ ad.	"
6748	"	"	♂ ad.	"
6749	"	"	♂ ad.	"
6750	"	"	♂ ad.	"
6751	"	"	♂ ad.	"
6752	"	"	♂ ad.	"
6753	"	"	♂ ad.	"
6754	"	"	♂ ad.	"
6755	"	"	♂ ad.	"
6756	"	"	♂ ad.	"
6757	"	"	♂ ad.	"

March 12th, 1890. Fort Snelling, Minn.

6758	Pocecetes	gramineus.	♂ ad	Given to Mrs. Bernard
6759	"	"	♀ ad	to paint from.

March 24, 1890. Fort Snelling, Minn.

6760	Calcarius	lapponicus.	♀ ad.	Measurements on Table.
6761	"	"	♀ ad.	do
6762	"	"	♀ ad.	do
6763	"	"	♀ ad.	do
6764	"	"	♂ ad.	Not measured.
6765	"	"	♂ ad.	do
6766	"	"	♂ ad.	do
6767	"	"	♂ ad.	do
6768	"	"	♂ ad.	do
6769	"	"	♂ ad.	do
6770	"	"	♂ ad.	do
6771	"	"	♂ ad.	do
6772	"	"	♂ ad.	do
6773	"	"	♂ ad.	do

6774	Plectrophenax	nivalis.	♀ ad.	Measurements on Table.
6775	"	"	♀ ad.	do
6776	"	"	♀ ad.	do
6777	"	"	♀ ad.	Not measured.
6778	"	"	♀ ad.	do
6779	"	"	♀ ad.	do
6780	"	"	♀ ad.	do
6781	"	"	♂ ad.	do
6782	"	"	♂ ad.	do
6783	"	"	♂ ad.	do
6784	"	"	♂ ad.	do
6785	"	"	♂ ad.	do
6786	"	"	♂ ad.	do
6787	"	"	♂ ad.	do

March 26th, 1890. Ft. Snelling, Minn.

*6788	Cyanocitta cristata	♂ ad.	Measurements on Table. Shot by Mrs. Mizener.	
6789	Coccothraustes vespertina	♂ ad.	Not measured.	
6790	"	♂ ad.		do
*6791	"	♂ ad.	Shot by Mrs. M.	do
*6792	"	♂ ad.	"	do
*6793	"	♂ ad.	"	do
*6794	"	♀ ad.	"	do
6795	"	♀ ad.		do
6796	"	♀ ad.		do
6797	"	♀ ad.		do
6798	"	♀ ad.		do

Sialia sialis. – First seen; singing; several ~~[illegible]~~ seen
Junco hyemalis. – Trilling; these are the second lot seen this year, the first (a small flock in the manure pile in the post garden) having been seen on March 17th.
Spizella monticola. – Now rather common for the first time.
Falco sparverius. – First seen; one.
Otocoris alpestris praticola. – Sits on the housetop to sing.

March 31st, 1890. Ft. Snelling, Minn.

Sialia sialis. – Seen the second time this spring.

April 1st, 1890. Ft. Snelling, Minn.

Sturnella magna. – First seen; one; singing in an aspen in front of my quarters.
Sialia sialis. – Common.
Merula migratoria. – Several seen; the second time this spring.
Prairie Hen or Sharp-tailed Grouse. – One flushed on Pike's Id.
Junco hyemalis; common, but not yet abundant.
Spizella monticola. – do
Clangula glaucium americana. – A flock of about twenty male Golden-eyes seen on Miss. Riv. The first ducks I have noticed. The Miss. is still closed with ice – fleeting.
Astragalinus tristis. – Out for the first, as far as noted.

6799	Cyanocitta cristata	♂ ad.	Measurements on Table.
6800	Merula migratoria	♂ ad.	do
6801	Sialia sialis	♀ ad.	do
6802	Spizella monticola	♂ ad.	do
6803	" "	♂ ad.	do
6804	" "	♂ ad.	do
6805	" "	♀ ad.	do
822	Lepus sylvaticus	♀ ad.	♂ testes about one inch long. Measurements on Table. Continued
823	Sciurus hudsonius	♀ ad.	do
824	" "	♂ ad.	do

Dr. Dutton shot a Mallard (Anas boschas) and Loon (Urinator imber).

April 2nd, 1890. Ft. Snelling, Minn.

6806	Sayornis phœbe	♀ ad.	Measurements on Table. a mated pair.
6807	" "	♂ ad.	Measurements on Table.
6808	Acanthis linaria	♂ juv.	ex positively determined. Measurements on Table.
6809	Spizella monticola	♂ ad.	do
6810	" "	♀ ad.	do
6811	" "	♂ ad.	do

Branta canadensis. – First seen; flying north.
Sayornis phœbe. – First seen; two pairs. (Pairs usual migrate in company as they always appear together.)
Agelaius phœniceus. – First seen; common. ?? do not think they were here in the morning, but became abundant towards evening; mostly flying over, though many alighted, and were heard singing.

The past few days have been quite pleasant, the sun shining most of the time, and the snow and ice fast disappearing. The Minnesota River, and other still waters, still frozen up solidly; but the Mississippi River ~~too~~ has been open in several places for some days past, and is very likely all open along this part to-day. Many ducks seen flying north.
Spermophilus franklinii. – First seen out of burrow.
Geomys bursarius. – Large numbers of mounds were raised to-day (for the first time) on sandy hillsides sloping to the sun, where the frost was out of the ground.

April 2 — Cont'd.

Merula migratoria.—
Sialia sialis.—
Spizella monticola.—
Junco hyemalis.—
} Now abundant; singing.

Acanthis linaria.— One shot from a flock of about 50; still common

Cyanocitta cristata.— Several were feeding on a dead calf.

April 4, 1890. Ft. Snelling, Minn.

6812 Coccothraustes vespertinus. ♀ad Not measured.
6813 " " ♀ad do
6814 " " ♀ad. do
6815 Parus atricapillus ♀ ad Measurements on Table.
6816 Merula migratoria ♂ ad. do
6817 Carpodacus purpureus ♂ ad. do

[825 Neophatis hudsonica ad. Mammoth Hot Springs, Yellowstone National Park, Wyoming Territory, Aug., 1889. Skull found in a balsam (Pseudotsuga douglassii) grove in a ravine.]
826 Seiurus hudsonius. ♀ ad. Measurements on Table.

Melospiza fasciata.— First seen; perhaps a dozen, shy, not singing much, and disposed to hide under logs and driftage.
Carpodacus purpureus.— First seen; three old males.
Ceryle alcyon.— First seen; one.
Charitonetta albeola.— First seen; one pair and 2 flocks.

The day was bright and warm.

April 5th, 1890. Ft. Snelling, Minn.

Deolecophagus carolinus.— First seen; large flocks.
Buteo borealis.— First identified. Several large Hawks were seen — possibly Marsh Hawks — during the last fortnight or so.
Ceryle alcyon.— Two seen flying together

Acanthis linaria.— Still present.
Junco hyemalis.— One heard singing its full song for the first.
Merganser serrator.— First seen; a female.
Probably most of the Ducks have arrived, although the ice is still solid on the Minnesota River and the neighboring lakes.

April 6, 1890. Ft. Snelling, Minn.

Colaptes auratus.— First seen.
Quiscalus quiscula aeneus.— First seen.
Sayornis phoebe.— Not seen since the first two days noted April 2nd, until to-day, when they appeared in numbers in the post.
Acanthis linaria.— A flock of about a hundred alighted in the garden behind my quarters. One single bird, perhaps an old male tho' I have seen none with red breasts, flew over my head, as I started out to sick call; singing a loud, lively song.
Deolecophagus Carolinus
Agelaius phoeniceus
} now abundant; large flights.
Passerella iliaca.— First seen; several.
Mirnator mimus.— A pair in the Minn. R. Silent; gentle.
Tachycineta bicolor.— First seen; flock of about 30. They kept closely together, and appeared to be gathering insects from the surface of the Miss. Riv., in a strong wind; scarcely ever raised more than a foot from the water. I shot one but could not recover it.

April 7, 1890. Ft. Snelling, Minn.

Acanthis linaria.— Still present.
Sayornis phoebe.— Now common.
Colaptes auratus.— Dozens seen to-day; frequent the ground.
Quiscalus quiscula aeneus.— Now abundant.
Passerella iliaca.— Several seen.
Poocaetes gramineus.— First seen; about 2 doz.
Spizella pallida.— First seen; about 20.
Ammodramus vociferus.— First seen. Two.

April 8th, 1890. Ft. Snelling, Minn.

827 Fiber zibethicus. ♂ ad. Measurements on Table.

Urinator imber. – Common on the Rivers. All the boys trying to shoot them. Watching the birds when any of them raised a gun to shoot, I could see its tail or legs disappear just before the shot struck the spot.

Arctomys monax. – There is one that will come partly out of its burrow under a stone when I call it.

April 9th, 1890. Ft. Snelling, Minn.

6818	Carpodacus purpureus.	♂ ad.	Measurements on Table.
6819	" "	♂ ad.	do
6820	" "	♀ ad.	do
6821	" "	♀ ad.	do
6822	Ceryle alcyon.	♂ ad.	do
6823	Passerella iliaca.	♂ ad.	do
6824	" "	♂ ad.	do
6825	" "	♂ ad.	do
6826	Junco hyemalis.	♂ ad. (sex positive)	do
6827	" "	♂ ad. do	do
6828	Spizella monticola.	♂ ad.	do

April 10th, 1890. Ft. Snelling, Minn.

828 Lepus sylvaticus. ♀ ad. Had just borne young. Measurements on Table, Uterus sent to Smithsonian Inst.

Corax americana. – First seen; six shot by Hannay.

Melanerpes erythrocephalus. – First seen; one.

April 11th, 1890. Ft. Snelling, Minn.

Gallinula galeata. – First seen; two.

Fulica americana. – First seen; common.

Lanius ludovicianus. – First seen; three.

April 10th — Continued.

6829	Passerella iliaca.	♀ ad.	Measurements on Table.
6830	" "	♀ ad.	do
6831	" "	♀ ad.	do
6832	" "	♀ ad.	do
6833	" "	♂ ad.	do
6834	Melospiza fasciata	♂ ad.	do

Passerella iliaca. – Abundant; singing. When frightened they fly into a bush or lower branches of a tree and sit quite still for a longtime like Thrushes.

Otocoris alpestris praticola. – Female gathering material for nest.

April 13th, 1890. Ft. Snelling, Minn.

Calcarius lapponicus. – One seen flying over the post, uttering successively its ~~[illegible]~~ twittering note, and a call similar to the first note of the Bluebird's warble. Its flight is very strong and somewhat undulatory.

Lanius ludovicianus. – Abundant.

Urinator imber. – Still present in Minnesota River. Four have been shot, but I have got none.

Tachycineta bicolor. – Now exceedingly abundant about the rivers.

Apr. 14th. – Calcarius lapponicus. – [illegible]

April 15, 1890. Ft. Snelling, Minn.

829 Geomys bursarius. ♂ ad. Measurements on Table.

April 18, 1890. Ft. Snelling, Minn.

830	Cusmophilus tridecimlineatus.	♂ ad.	Measurements on Table.
831	" "	♂ ad.	do
832	" "	♀ ad.	do

104 4

Plant Calendar for 1890.

(See p. 61.)

Pasque-Flower (Anemone patens var nuttalliana). A single flower April 10. None could be found April 11th.

Dicentra — First [illegible] April 20.

Hepatica — " " April 18.

Salix, Populus & Cottonwood now in full flower (April 20).

The leaves of Nuphar advena are rising to the surface. Under water they look like red flowers, being gorgeously red in color until they come to the surface when they [illegible] change to green.

Ranunculus _____ . - First in bloom April 22nd.

Antennaria _____ . do 24th.

Viola cucullata — May 3 ~~April 27~~

Astragalus — April 27

Phlox — May 11.

Pedicularis — Yellow. May 11.

(Yellow Umbelif.) May 11.

Prunus — Wild Plum; May 10.

(Wild Choke Cherry) May 10.

Plant Calendar for 1891.

Anemone patens Nuttalliana. - First flowers April 11; several gathered.

"Pussies" out on the willows (S. rostrata) and aspens (P. tremuloides) Apr. 8.

Dicentra cucullata. - First in flower April 20

Ranunculus " 21.

Hepatica triloba } First Seen April 22.
Sanguinaria Canadensis }

Antennaria _____ . - First Seen Apr. 25.

Sedge (spec. collected) " " Apr. 25.

Viola cucullata. - First seen Apr. 30.

Ranunculus (abortivus?). Spec. taken. First seen Apr. 29. 1891

Shells.

For list of shells from Delaware Water Gap. (see page 79.) Identified by
" " " " " Highland, Ulster Co., N.Y. " " 80 } Sanderson Smith.

Shells from Fort Snelling, Minn. (Identified by W. H. Dall):—

Bivalves:—

Unio alatus Say.
" subovatus Sea.
" luteolus Lam.
" trigonus Sea.
" gracilis Sea.

Univalves:—

Helix multilineata Say.
Helix (Patula) alternata Say.
Planorbis trivolvis Say.
" campanulatus Say.
" bicarinatus Say.
Physa heterostropha Say "Young shells which are probably this species.
Succinea obliqua Say.
Limnaea stagnalis Linn.
Limnaea reflexa Say.
Campeloma subsolida Anth.
Helix monodon Rackett.

Shells from Mammoth Hot Springs (under Douglass's Spruce), Yellowstone National Park, Wyoming Ter. (Identified by W. H. Dall):—

Helix (Patula) strigosa Gould.

When at the American Museum, I ran across a number of old shells collected at Highland Falls, New York. They were identified by Prof. Sanderson Smith, who retained a series and returned the rest to me labelled. There is a list of them somewhere.

Unio luteolus.— On April 27, 1890. I dug four specimens from a bank of sandy mud at the edge of the Minnesota River. They were fat and in good condition for any purpose of gastronomic experimentation. I accordingly opened and washed the mud from the visil, + had them fried in batter. The tough portion proved uneatable, but the greater part tasted good, and was so pronounced by the children, who were unprejudiced. I detected a slight muddy flavor, but in general they were very good. These four shells were preserved. One of the two largest sent to Washington and identified as Unio luteolus, Lam.

Preserved in Alcohol:—

14 bivalves (mostly Unio) with living animals in them from shore (Minnesota River side) of Pike's Island, at junction of the Minnesota with the Mississippi River. Early in summer of 1888. About a dozen species.

13 bivalves (Unios) removed from shells and each wrapped separate in gauze. Shells in Am. Mus. Coll., with Nos. corresponding to those with these specimens. Same time & place as above.

8 Specimens of Campeloma subsolida, Anth. Living animals in shells. Same time & place as above.

April 20, 1890. Fort Snelling, Minn.

833 Spermophilus franklinii. ♀ad. Measurements on Table.

Calcarius lapponicus. – Several seen with solid black throats. Singing.
Spizella socialis. – First seen; two.
Xanthocephalus xanthocephalus. First seen; one male.
Chiroeola riparia. – First seen; several.
Thousands of Ducks were seen on the lakes (Amelia, etc.)
Sphyrapicus varius. – First seen.
Gallinago delicata. – First seen; one.

April 21, 1890. Ft. Snelling, Minn.

Progne subis. – First seen; one. Has, doubtless, been present a long time, but I did not see it.
Molothrus ater. – First seen; flock of about 20, with about one-fourth females.

April 22, 1890. Ft. Snelling, Minn.

Zenaidura macroura. – First heard; cooing.
Regulus calendula. – First seen; several; singing.
Dendroica coronata. – First seen; several flocks.
Actitis macularia. – First seen; one pair.
Totanus melanoleucus. – First seen; four.
Calcarius lapponicus. – One seen.

April 25, 1890. Fort Snelling, Minn.

Otocoris alpestris praticola. – The young left the nest in front of my house to-day.
Spinus tristis. – First seen this year; one male in summer plumage.
6835 ~~6834~~ Colaptes auratus. ♂ad. Measurements on Table.
834 Spermophilus franklinii. ♀ad. Measurements on Table. Not pregnant.

April 26, 1890. Ft. Snelling, Minn.

Junco hyemalis. – Growing quite scarce.
Spizella monticola. – Much less ~~common~~ abundant, but still quite common.
Dendroica coronata. – Now abundant. The majority still in winter plumage, but many ~~still~~ are rapidly acquiring the spring dress.

April 27, 1890. Ft. Snelling, Minn.

Harporhynchus rufus. – First seen; singing; four.
Zonotrichia albicollis. – First seen; one; silent.
Quiscalus quiscula aeneus. – The bear old cow droppings into bits, hunting for food.
Seoleeophagus carolinus. – One old male seen; probably still common.
Xanthocephalus xanthocephalus. – Now abundant.
?? Hydrochelidon nigra surinamensis. – First seen; two seen at a distance – possibly Killdeers.

April 30, 1890. Ft. Snelling, Minn.

Antrostomus vociferus. – First heard.
Passerella iliaca. – One seen.

May 1st, 1890. Ft. Snelling, Minn.

Mniotilta varia. – First seen; one.
Dendroica palmarum ~~hypochrysea~~. – First seen; one.
Helminthophila celata. – First seen; many seen in willows, moving slowly among the just leaving branches.

6836	Dendroica palmarum ~~hypochrysea~~	♂ad.	Measurements on Tab.
6837	Helminthophila celata.	♂ad.	do
6838	" "	♂ad.	do
6839	" "	♀ad.	do
6840	" "	♀ad.	do
6841	Dendroica coronata.	♂ad.	do
6842	Molothrus ater.	♂ad.	do
6843	" "	♀ad.	do
6844	Cyanocitta ~~cristata~~.	♀ad.	Had laid part of her eggs. do.
6845	Sphyrapicus varius.	♂ad.	do

6846 Anas penelope ♂ad. Chesapeake Bay. Jan. 11, 1890.
~~6847~~ (6847) Anser albifrons gambeli. – ad. Shot on Verde Lake, Upper Verde Valley, Arizona, in the winter of 1889–90, by Dr. William Stephenson, U.S.A.

May 5, 1890 Ft. Snelling, Minn.

Melospiza palustris has been here about two week. Common in the marsh beside the Minnesota River.
Galeoscoptes carolinensis. – First seen; one.
Guiraca ludoviciana. – First seen; one male.
Empidonax minimus. – First seen; one.
Turdus mustelinus. – First seen; one.
Turdus pallasi. – First seen; one or two
Zonotrichia albicollis. First seen on April 27th; Now abundant.
Junco hyemalis. – One seen.
Dendroica palmarum ~~palmarum~~. – This species was seen everywhere in great abundance.
Ampelis cedrorum. – First seen; small flock.
Botaurus lentiginosus. – First heard "stake-driving"; apparently abundant allover the marsh. Don't know how long they've been here.
Sciurus naevius. – First seen; two.

6848 Turdus aonalaschkae pallasi ♀ ad. Meas. on Table.
6849 Melospiza georgiana. ♀ ad. do
6850 " " ♂ ad. do
835 – Tamias striatus (lysteri?). ♀ ad. Not measured.
Turdus aliciae. – First seen; one.

May 6, 1890. Ft. Snelling, Minn.

6851 Gallinago delicata ♀ ad. Measurements on Table.
6852 Zenaidura macroura. ♀ ad. do.
6853 Melospiza georgiana ♂ ad. do
6854 " " ♂ ad. do
6855 " " ad. do
6856 " " ♂ ad. do
6857 " " ♂ ad. do
6858 " " ♂ ad. do

May 6 – Continued

6859 Melospiza georgiana ♂ ad. Measurements on Table
6860 " " ♂ ad. do
6861 " " ♂ ad. do
6862 Turdus fuscescens ♂ ad. do
6863 Vireo flavifrons ♀ ad. do
6864 Carpodacus purpureus ♀ ad. do
6865 Seiurus naevius ♂ ad. do
6866 " " ♂ ad. do
6867 Coccothraustes vespertina ♀ ad. Not Measured.
6868 " " ♀ ad. do
6869 " " ♂ ad. do
6870 " " ♂ ad. do
6871 " " ♂ ad. do
6872 " " ♂ ad. do
6873 " " ♂ ad. do
6874 " " ♂ ad. do

Passerella iliaca. – None seen since April 30, when only 1 seen.
~~Sylvania pusilla. First seen, one male.~~
Dendroica palmarum. – Now very common in grassy openings.
Seiurus naevius. – Abundant.
Seiurus aurocapillus. First seen.
Spizella monticola. – First seen; last seen Apr. 26, when quite a number were present.
Turdus aliciae. – Now quite common.

Vulpes velox. – A specimen collected in Montana by the D. G. Elliot expedition measured as follows (measured by myself from the skin in pickle with all the bones intact). – Tot, 123; manus, 85; ear above note, 60; fore limb (about) 260; hind limb (about) 320; hind foot from knee, 226; fore limb from olecranon, 185; tail vertebrae (about 190); hairs 73 m.m. longer.

May 8, 1890. Ft. Snelling, Minn.

6875	Turdus aonalaschkae pallasi	♀ ad.	Measurements on Table
6876	Muscicapa quiscula aeneus	♂ ad.	do
6877	Sturnella magna	♂ ad.	do
6878	" "	♀ ad.	do
6879	" "	♂ ad.	do
6880	Totanus solitarius	♀ ad.	do
6881	Totanus flavipes	♀ ad.	do
6882	Ægialitis vocifera	♂ ad.	do
6883	Totanus flavipes	♂ ad.	do
6884	" "	♀ ad.	do
6885	Habia ludoviciana	♂ ad.	do
6886	Dendroica palmarum	♂ ad.	do
6887	" "	♂ ad.	do
6888	" "	♂ ad.	do
6889	" "	♂ ad.	do
6890	" "	♂ ad.	do
6891	Sylvania pusilla	♂ ad.	do
6892	Melospiza ~~Melodia~~ fasciata	♂ ad. (Parent of set 4 eggs.)	do
6893	Junco hyemalis	♀ ad.	do

Sylvania pusilla. - First seen; one male.
Totanus flavipes. - First seen, though probably here some time, as I have not been where it is found.
Totanus solitarius, First seen but do do
Melospiza georgiana. - Very abundant.
Coccothraustes vespertina. - Common in maple woods etc.
Junco hyemalis. - But one seen and shot.
Ægialitis vocifera. - Breeding.
Actitis macularia. — "
Vireo olivaceus. - First seen; one; singing.

Letter dated March 4, 1891

"As to the House Wrens, your specimens are all much darker and much larger than Scott's mariana. No. 5376 "a migrant"; is the nearest approach to mariana, and a summer specimen, No. 4915, is similar; but even these are larger & darker than the Scott birds. Your House Wrens are very large and dark in comparison with the mariana series, even the four to which you call special attention in your letter." J. A. Allen in litt.

May 10, 1890. Ft. Snelling, Minn.

Helminthophila rufficapilla. - First seen; one in Negundo acer.
Setophaga ruticilla. - First seen, two males.
Icterus galbula. - First seen; four males.

836	Leomyza bursarius	♀ ad.	Measurements on Table. Contained x 3 fertilens.
6894	Icterus galbula	♂ ad.	Measurements on Table.
6895	" "	♂ ad.	do
6896	Dendroica coronata	♀ ad.	do
6897	Sylvania pusilla	♂ ad.	do
6898	Dendroica palmarum	♀ ad.	do
6899	Geothlypis trichas	♂ ad.	do
6900	Empidonax minimus	♂ ad.	do
6901	Regulus calendula	♂ ad.	do
6902	Spizella pallida	♂ ad.	do
6903	Melospiza fasciata	♀ ad. (Parent of set of 4 eggs.)	do
6904	" "	♀ ad.	do
6905	" "	♂ ad.	do
6906	~~Melo~~ Zonotrichia leucophrys	♂ ad.	do
6907	Turdus aliciae	♂ ad.	do
6908	Totanus solitarius	♀ ad.	do
6909	" "	♂ ad.	do
6910	Querquedula discors	♂ ad.	do

Geothlypis trichas. - First seen; one ♂ on Pike's Island.
Seiurus aurocapillus. - Now common.
Turdus mustelinus. - Now common.
Habia ludoviciana. - Females first seen; now abundant.
Anas discors. - Now very abundant, and gentle.
Totanus solitarius } Still abundant.
Totanus flavipes }
Harporhynchus rufus. - Saw a boy who had 4 eggs that he had just taken from a nest.
Sirens hudsonius. - A blue one on Pike's Island.
Zonotrichia leucophrys. - First seen; one; singing somewhat like a Field Sparrow.
Melospiza fasciata. - Nest + 4 eggs with parents taken.
Melospiza georgiana. - Still very abundant.
Turdus aliciae. - Very common.
Dendroica virens. - First seen; one female.

May 11, 1890. Ft. Snelling, Minn.

6911	Calcarius lapponicus	♂ ad.	Measurements on Table.
6912	" "	♀ ad.	do
6913	Spizella pallida	♂ ad.	do

Spizella pallida. – Now abundant; singing.
Calcarius lapponicus. – Still quite numerous, in pairs and small flocks along the edges of ploughed fields.
Pipilo erythrophthalmus. – First seen; one male.
Seiurus noveboracensis. – Several seen.
Zonotrichia ~~leucophrys~~ albicollis. – Still abundant.
? Tyrannus tyrannus. – First seen; a pair.

May 13, 1890 Ft Snelling, Minn.

Setophaga ruticilla. – Now common.
Dendroica maculosa. – First seen; common; all males.
Chondestes grammacus. – First seen; a pair in the garden.
Zonotrichia albicollis. – Still very abundant.
Zonotrichia leucophrys. – Now abundant.
Zonotrichia querula. – First seen; several.
Ampelis cedrorum. – Now in flocks about the Hospital.
Cyanocitta cristata. – Two large flocks seen migrating; the smallest contained 35 Jays. Our resident Blue Jays now have their full complement of eggs laid.
Spinus tristis. – Now common.
Cistothorus stellaris. – First seen; four shot; others seen.
Dendroica tigrina. – First seen; common in willows.
Dendroica ~~maculosa~~ pennsylvanica. – First seen; several.
Dendroica coronata. – Still very abundant.
Dendroica aestiva. – First seen; one male.
Helminthophila ruficapilla; first seen on the 10th. None seen since until to day when it was common in willows.
Helminthophila peregrina. – First seen; one shot in willow tree.
Helminthophila chrysoptera. – First seen; one shot; male.
Sylvania pusilla. – Now abundant.
Setophaga ruticilla. – Now abundant.
Vermivora varia. – Common.
Geothlypis trichas. – Males now common; females.

May 13th — Concluded.

6914	Cistothorus stellaris	♂ ad	Measurements on Table.
6915	" "	♂ ad.	do
6916	Dendroica tigrina.	♂ ad.	do
6917	" "	♂ ad.	do
6918	" "	♂ ad.	do
6919	" "	♂ ad.	do
6920	Dendroica maculosa	♂ ad.	do
6921	Dendroica pennsylvanica.	♂ ad	do
6922	Dendroica coronata.	♂ ad.	do
6923	" "	♀ ad.	do
6924	Dendroica aestiva.	♂ ad.	do
6925	Helminthophila ruficapilla	♂ ad.	do
6926	" "	♂ ad.	do
6927	" "	♂ ad.	do
6928	Helminthophila chrysoptera	♂ ad.	do
6929	Helminthophila peregrina	♂ ad.	do
6930	Sylvania pusilla	♂ ad.	do
6931	Setophaga ruticilla	♂ ad.	do
6932	" "	♂ ad.	do
6933	Regulus calendula	♀ ad. (crown plain.)	Not Measured
6934	" "	♀ ad. (crown plain.)	do
6935	" "	♂ ad. (crown red.)	do
6936	Antrostomus vociferus	♂ ad.	Measurements on Table.
6937	Zonotrichia albicollis	♀ ad.	do
6938	Zonotrichia querula	♀ ad.	do

Dendroica palmarum. – Extremely abundant in all grassy openings that are near trees or woods.
Dendroica striata. – First seen; one in an oak-tree on high ground.
Spizella pallida. – Now very common.
Melospiza georgiana. – Most of the migrants have passed through during the last 10 days; but the resident birds are abundant. The only one shot was a female.
Melospiza ~~fasciata~~ ~~fuscata~~ ~~alcicae~~. – Nest and 3 eggs on ground beneath a bush. One or two seen in high ground.
Habia ~~melanocephala~~ ludoviciana. – Females are now almost as common as males. The latter sing sweetly when chasing each other and fighting.
Trochilus colubris. – First seen; one male.

May 15, 1890. Fort Snelling, Minn.

6939 Dendroica tigrina ♂ ad. Measurements on Table.
~~6940~~ Irides hazel. Bill and feet blackish.
6940 Helminthophila ~~tigrina~~ peregrina ♂ ad. Measurements on Table.
6941 " " ♂ ad. do
6942 " " ♂ ad. do
In the above three specimens, the irides are hazel; the bill dusky plumbrous above, pale plumbrous below; tarsi and toes yellowish gray; claws grayish horn-color.
6943 Helminthophila ruficapilla ♂ ad. Measurements on Table.
6944 " " ♂ ad. do
6945 " " ♂ ad. do
In the above three specimens the irides are brown; bill brownish black above, grayish on sides, and yellowish at base of mandible. Tarsi ~~and~~ toes and claws yellowish brown tinged with gray.
6946 Sylvania pusilla. ♂ ad. Measurements on Table.
Irides brown. Bill with maxilla and tip of mandible plumbrous black; base of mandible yellow. Tarsi, toes & claws yellowish brown.
6947 Troglodytes aëdon parkmanii ♂ ad. Measurements on Table.
Irides reddish brown. Bill brownish black on maxilla; mandible flesh-color tipped with pale plumbrous. Tarsi, toes and claws grayish brown.
6948 Cistothorus stellaris. ♂ ad. Measurements on Table.
Irides hazel. Bill with maxilla and tip of mandible brownish black; residue of mandible flesh-color. Tarsi flesh-color; feet and claws pale fleshy brown.
6949 Xanthocephalus xanthocephalus. ♂ ad. Measurements on Table.
6950 " " ♂ ad. do
Irides brown. Bill purplish black (or neutral tint) Feet & claws black.
6951 Icterus galbula. ♀ ad. Measurements on Table.
6952 Porzana carolina ♂ ad. do
Irides cherry-red. Bill yellow, tinged with green. Legs and feet green, the joints & under surface of toes grayish; claws brownish gray.
6953 Fulica americana ♂ ad. Measurements on Table.
Irides bright red. Bill white with basal process of maxilla, a subterminal spot on maxilla and one on each side of mandible dark Indian red. Bare portion of tibia greenish, with an orange spot on

outer side; front & sides of tarsus & dorsal surface of toes yellowish green; bell, a narrow line ~~[illegible]~~ edging the tarsus behind, under surface of toes and outer edges of (perhaps?) bluish-gray or plumbrous; claws plumbrous black.
✓ 6954 Fulica americana ♀ ad. Measurements on Table.
The coloring of soft parts similar to the above but with the Indian-red basal portion of the bill much reduced, the iris cherry-brown, and the legs and feet much duller, lacking the strong yellowish.
6955 Dendroica virens ♀ ad. Not measured. Wounded May 10th.
6956 Cistothorus stellaris ♂ ad. Not measured; no tail.
Trochilus colubris. – Now common; about wild gooseberries.
Helminthophila celata. – One seen.
Helminthophila ruficapilla. – More abundant than any other warbler except Dendroica coronata.
Dendroica striata. – One male.
Dendroica pennsylvanica. – Common.
Geothlypis trichas. – Now abundant, but no females yet.
Mniotilta varia. – Common.
Setophaga ruticilla. – Exceedingly abundant.
Turdus aliciae. – One.
Fulica americana. – I found a Coot's nest in a small pond and shot both of the old birds. The nest was lined with down from the male's breast, which was pulled clean, though the female had not lost a feather from her underparts. These were five eggs in the nest, which were taken.
Totanus flavipes. – One seen.
Sterna ~~[illegible]~~ hirundo. A number seen.
6957 Dendroica coronata ♂ ad. Not measured.
6958 " " ♂ ad. do
6959 " " ♂ ad. do
6960 " " ♂ ad. do
6961 " " ♂ ad. do
6962 Helminthophila ruficapilla ♂ ad. do
6963 " " ♂ ad. Measurements on Table
6964 " " ♂ ad. do
6965 Regulus calendula ♀ ad. (crown plain). Not ~~[illegible]~~ measured.
6966 Coccothraustes vespertina ♂ ad do
No. 837 Lepus sylvaticus ♀ juv. Young of year. Not measured.

May 17, 1890. Fort Snelling, Minn.

No. 838. Agricola ♀ juv.
Total length, 124; Head & body, 94; Tail vert 38
hairs. 42; nare to eye 10.5; ear 22; occiput 26
tip of ear 33; end hind ly. 127; Ear height, 7; width 9.5;
Tarsus 33; digitorum 25 manus. 12
Hind limb 45 patella 34 pes 18; width 4.2. Whiskers 22

6967 Helminthophila ruficapilla ♂ ad. Measurements on Table.
6968 " " ♀ ad. do
6969 Helminthophila peregrina ♂ ad. do
6970 Seiurus naevius. ♂ ad. do
6971 Dendroica tigrina ♂ ad. do
6972 Dendroica aestiva ♂ ad. do
6973 Porzana carolina ♀ ad. do

Anas discors. – Took set of 10 eggs. Color creamy white.
44 x 33, 45 x 33, 43 x 34, 43 x 33, 45 x 33,
44 x 34, 44 x 33, 44 x 33, 45 x 34, 44 x 33

6974 Helminthophila peregrina ♂ ad Measurements on Table
6975 " " ♀ ad. do
6976 " " ♂ ad. do
6977 " " ♂ ad. do
6978 Helminthophila ruficapilla. ♂ ad. do
6979 " " ♀ ad. do
6980 " " ♀ ad. do
6981 " " ♀ ad. do
6982 " " ad Not Measured
6983 " " ad " "
6984 " " ad. " "
6985 " " ad. " "
6986 Dendroica aestiva. ♂ ad. " "
6987 Dendroica coronata. ♀ ad. " "
6988 " " ♀ ad. " "

Melospiza lincolni. – First seen; one in Hospital garden.
Rallus virginianus. – First seen; one shot. It has probably been here some time, but I have not visited the marshes much.

May 19, 1890. Minnesota

6989 Sterna hirundo ♂ ad. Measurements on Table.
6990 " " ♀ ad. do

In both of the above the iris is dark brown. Bill orange-red exactly of the same shade as the feet tipped black. Tarsi & feet orange-red. Outer web of outer tail-feather dusky. Ridgway in manual p. says it is the inner web.
Hydrochelidon nigra surinamensis. – One seen; the first seen, unless the record of April 27 (p. 109) is correct.
Dendroica vigorsii. – First seen; one male on the parade.

May 20th, 1890. Fort Snelling, Minn.

Dendroica vigorsii. – One in same place as above; probably the same one.

May 21, 1890. Fort Snelling, Minn.

Sterna forsteri. – There has been an unusual flight of Forster's Terns, commencing May 15. They are still abundant. Sometimes hundreds are seen.
Hydrochelidon nigra surinamensis. – Exceedingly abundant.
Tringa maculata. – A flock of four.
Totanus flavipes. – A few.
Totanus solitarius. – Abundant, but less so than a ago.
Dendroica maculosa. – Still present.
Dendroica aestiva. – Quite abundant.
Dendroica striata. – Still scarce.
Dendroica coronata. – Abundant; mostly females.
Dendroica castanea. – First seen; one male shot.
Helminthophila ruficapilla. – The female usually lacks the chestnut crown, and it is rare for it to amount to more than a trace if present. The most abundant warbler in the willows and cottonwoods of the river bottoms.
Helminthophila celata. – Still present; sometimes frequents the willow-tops but more often seen in shrubbery.
Compsothlypis americana. – First seen; one male in a willow-tree.
Dendroica palmarum. – Still abundant.
Seiurus noveboracensis. – Very abundant.
Geothlypis trichas. – Still [illegible] male

May 21st — Continued

Sylvania fusella. — Still common; the first female.
Setophaga ruticilla. — Great numbers have been seen for a few days past; but to-day none were seen.
Haleoscoptes carolinensis. — A pair building their nest.
Harporhynchus rufus. — All now paired & nesting
Regulus calendula. — No Kinglets seen to-day. Those seen lately lacked the ruby crowns were all females.
Turdus aliciae. — Still common. This and T. ustulatus are the only ones of the subgenus Hylocichla lately seen.
Chelidon erythrogaster. — First seen; one.
Tachycineta ~~thalass~~ bicolor. — Still commonly seen.
Petrochelidon lunifrons. — Now abundant. First noted on May 15th, but doubtless present earlier.
Melospiza fasciata. — Nest & eggs on ground. Pike's Island.
Chondestes grammaca. — Now common about cultivated ground.
Otocoris alpestris praticola likes to wade in water in pools in the roads.
Tyrannus verticalis. — One pair; not yet common.
Chordeiles virginianus. — First seen on May 17th. Not yet common.

Buteo platypterus
Accipiter cooperi
Accipiter velox
Circus hudsonius
Falco sparverius
} The only hawks seen lately; breeding

Ardea herodias; — First seen; one.

6991 Anas discors ♂ ad. Measurements on Table. Irides dark hazel. Bill purplish olive-brown, mottled with flesh-color below. ~~Legs & feet~~ Tarsi, Bare tibia, Tarsi and toes grayish yellow; webs dusky olive; claws horn color

6992 Sterna ~~hirundo~~ hirundo ♀ ad. Measurements on Table.
6993 Hydrochelidon nigra surinamensis ♂ ad. do
6994 " " " ♀ ad. do

Irides dark brown. Bill purplish black, orange-red at angle of mouth. Legs & feet deeply vermilion; claws black

6995 Turdus aliciae. ♂ ad. Measurements on Table. Iris dark hazel. Bill dark brown, flesh color on basal half below. Tarsi brownish flesh-color; feet and claws grayish brown.
6996 Zonotrichia leucophrys. ♀ ad. Measurements on Table. Iris hazel. Bill pale reddish brown, tipped with dusky. Feet brown; claws blackish.
6997 Helminthophila celata. ♀ ad. Measurements on Table. Iris hazel. Bill brownish gray above, bluish gray below, with extreme base of mandible horn-color.
6998 Dendroica pensylvanica. ♂ ad. Measurements on Table. Iris hazel. Bill with maxilla black, mandible yellow. Legs feet and claws brown. There is a minute white spot above and below the eye.
6999 Dendroica castanea. ♂ ad. Measurements on Table. Iris hazel, Bill blackish, bluish gray on basal portion of mandible. Feet flesh plumbeous; claws horn-color.
7000 Helminthophila ruficapilla ♀ ad. Measurements on Table ~~Not measured~~
7001 " " ♂ ad. Not ~~Measured~~
7002 " " ♂ ad. do

Mimus carolinensis. — First seen; 3 eggs Pike's Island.

May 22, 1890. Ft. Snelling, Minn.

Anas discors. — Breeding very abundantly. They are all paired. I walked to the edge of the slew on Pike's Island and saw a pair swimming down towards me, the male ahead. I sat down on the bank and the swam past within ten feet of me, turned around and swam past, but flew off with another male that ~~flew~~ passed, and this male followed. A female was quacking just as loud as she could close under the bank, and only flew when I tried to scare her. The note of this species is a ~~thin~~ shrill piping croak. They are absurdly tame; returning and realighting in place where I should if you have the patience to wait a few minutes. The bottom of their nests are not lined, but there is a deep layer of down all around their sides, which is doubtless used to cover the eggs when the female leaves her nest to bathe

May 22 — Continued

Icteria virens. - First seen; three on Pike's Island.
Limosa haemastica. - First seen; one on Pike's Island.
Actitis macularia. - They fly up, whenever approached, with a great outcry; fluttering in the air with their wings much arched downward, and their feathers so puffed up that they look nearly as large as Killdeers! Breeding in great numbers on Pike's Island.
Totanus solitarius. - Only two seen. Nearly all departed with the return of fair, warm weather. The few remaining will probably breed. The migration is over.
No Yellowlegs seen.
Pontopus borealis. - First seen; two.
Dolichonyx oryzivorus. - First seen. There were none yesterday; but the males are abundant to-day.
Xanthocephalus xanthocephalus. - Large flocks of males — no females — on the parade for a fortnight past.
Spinus tristis. - Now in perfect breeding plumage.
Spizella socialis. - Common about houses and yards.
Ammodramus hyemalis. - Not seen since No. 6 was shot.
Zonotrichia albicollis. - Common; mostly females.
Vireo gilvus. - First seen; one.
Vireo noveboracensis. - First seen; one on Pike's Island.
Mniotilta varia. - Common.
Helminthophila ruficapilla. - Common.
Dendroica aestiva. - Much more abundant than hitherto.
Dendroica coronata. - Comparatively scarce & nearly all females.
Dendroica maculosa. - One.
Dendroica pensylvanica. - Common.
Dendroica striata. - The first females seen.
Dendroica palmarum. - Only one seen.
Seiurus noveboracensis. - Very abundant.
Geothlypis trichas. - Very abundant.
Geothlypis philadelphia. - First seen; one male.
Sylvania pusilla. - Still plentiful.
Sylvania canadensis. - First seen; both sexes.
Setophaga ruticilla. - Both sexes very abundant.
Regulus calendula. - One seen.
Merula migratoria. - Nest in top of hollow willow stump 8 feet high, 3 eggs nearly hatched. Locality such as an owl or grackle would choose.

May 22 — Concluded.

7003 Anas discors ♂ ad. Measurements on Table. Not skinned.
7004 " " ♂ ad. do do
7005 " " ♂ ad. do do
7006 Dendroica striata ♂ ad. Measurements on Table.
7007 " " ♀ ad. do
In these two the irides are hazel; the bill plumbeous black, yellow at base of mandible. Tarsi & toes pale yellow; claws brownish horn-color.
7008 Sylvania pusilla ♀ ad. Measurements on Table.
7009 Limosa haemastica ♂ ad. do.
Irides hazel. Bill olive-brown at base above, olive-yellow at base below and on sides, fading to black on terminal portion. Legs, feet and claws grayish black.
7010 Sterna hirundo ♂ ad. Measurements on Table.
7011 Chordeiles virginianus ♂ ad. Measurements on Table.
Iris hazel. Bill plumbeous black. Feet plumbeous; claws plumbeous black, the middle ones edged with horn-color.
7012 Pontopus borealis ♂ ad. ~~Irides hazel.~~ Measurements on Table.
Irides hazel. Bill with maxilla and tip of mandible black, base with olive; basal portion of mandible yellow. Feet plumbeous black; claws black.
7013 Dolichonyx oryzivorus ♂ ad. Measurements on Table.
7014 Hydrochelidon nigra surinamensis ♀ ad do
7015 " " " ♂ ad do
7016 " " " ♀ ad do
Pyanocitta cristata. - Nest 4 eggs (1 broken). Pike's Island in clinging box-elder overhanging the Minnesota River.

May 24, 1890. Ft. Snelling, Minn.
Piranga erythromelas - First seen; one male.

May 25th 1890. Fort Snelling, Minn.
7026 Icterus galbula. ♂ ad. Measurements on Table.

May 26, 1890. Ft. Snelling, Minn.

7017 Chordeiles virginianus ♂ ad. Measurements on Table.
7018 Turdus fuscescens ♂ ad. do
7019 Dendroica striata. ♀ ad. do
7020 Dendroica aestiva. ♀ ad. do
7021 Geothlypis trichas. ♀ ad. do
7022 Geothlypis trichas ♀ ad do
7023 Helminthophila peregrina ♀ ad. do
7024 " " ♂ ad. do
7025 " " ♂ ad. do

Geothlypis philadelphia. – Abundant; both sexes.
Helminthophila ruficapilla. – Comparatively scarce.
Helminthophila peregrina. – Extremely abundant. The female in yellowish plumage (No. 7023) had the soft parts colored like the male, except that the feet were a little paler and more yellowish.
Setophaga ruticilla. – Abundant; ♂♂ most numerous.
Dendroica pennsylvanica. – Common.
Dendroica striata. – Abundant.
Dendroica aestiva. – Very abundant.
Clivicola riparia. – Its cry is a (miniature?) of the nighthawk's
Zonotrichia albicollis. – Getting very scarce.
Passerina cyanea. – First seen; one male in full song.

May 27, 1890. Ft. Snelling Minn.

Contopus virens. – First seen.
Protonotaria erythronotus. – One male; the second seen.

May 28, 1890. Fort Snelling, Minn.

Contopus virens. – Now abundant.
Hydrochelidon nigra surinamensis. – At least a hundred in sight at once, below the bridge on Miss. River. Their fluttering flight, quite like the swallows, is in strikingly contrast with that of Sterna forsteri which descends perpendicularly upon its prey like an arrow. When it strikes the water it makes a splash like the sound of a flat stone striking the water, and when numbers are fishing this noise is peculiar & characteristic.
Flocks of Large Snipes. – Seen flying in the morning.
Antrostomus vociferus. – One seen sitting on a low limb, lengthwise of the branch. The popular notion that this species and Chordeiles virginianus perch one crosswise and the other lengthwise of the branch is wrong. Both species have recently been under close observation, and both sat lengthwise of the branch. Quite probably both may sit crosswise if the notion suggests them.
Contopus borealis. – One seen.
Empidonax traillii. – First seen; common in willow bushes in the river bottoms.
Empidonax minimus. – Everywhere common.
Tyrannus tyrannus. – Common everywhere.
Habia ludoviciana. – Two nests found; one contained two (2) eggs and the other three (3) eggs. The first built in an elm 25 ft from ground towards the extremity of a horizontal branch; the second in a willow 15 feet.
Pheucticus ludovicianus. – Nest & 5 eggs, two of which were broken. In dead willow, 25 ft. from ground.
Agelaius phoeniceus. – Many nests in rushes (triangular-bladed leaves) below hospital. Eggs none to three.
Zenaidura macroura. – Set of 2 eggs in fork of a large willow-tree 20 feet from ground.
Pooecetes gramineus. – Nest & 4 eggs beside hassock of grass.

May 28th — Continued

Harporhynchus rufus. — Two nests of 4 eggs each. The first (eggs elongate) on mound at foot of small aspen-tree, in a brushy swamp on high prairie; the second at base of dwarf willow in dry brushy prairie.

Mimus tristis. — Now very abundant; singing.

Zonotrichia ~~leucophrys~~ Gambelii. — Not seen since May 26.

Zonotrichia leucophrys. — Last seen May 21st.

Melospiza lincolnii. — One seen.

Ampelis cedrorum. — Abundant in willow woods, beside the rivers. Flocks much scattered.

Vireo olivaceus. — Scarce.

Helminthophila peregrina. — Abundant. Sings incessantly. (Like ruficapilla.) A male shot had red spots in centre of feathers, two. Its song a sprightly, somewhat varied and pleasing trill.

Helminthophila ruficapilla. — All appear to have passed on; not one seen.

Dendroica tigrina. — One seen.

Dendroica coronata. — Only two (♂ & ♀) in all day.

Dendroica pennsylvanica. — Very common in willows.

Dendroica striata. — Several seen.

Seiurus noveboracensis. — Several seen; growing scarce.

Geothlypis philadelphia. — Abundant. Utters as sharp a chip as Seiurus noveboracensis.

Sylvania pusilla. — Still common.

Sylvania canadensis. — Still common.

Setophaga ruticilla. — Still migrating; mostly ♀♀.

Galeoscoptes carolinensis. — Nest 4 + 1 eggs respectively.

Turdus migratorius. — Many now have young. A nest found May 15 in a hollow stump of willow beside a lake in just such a spot as a Grackle or Owl would choose. It contained 3 eggs nearly hatched.

Sitta carolinensis. — Several seen; their young are probably hatched & the old birds are abroad hunting food for them.

Regulus calendula. — Not seen for some days past.

Turdus swainsoni. — First seen; one shot.

Coccothraustes vespertina. — Still heard, and occasionally seen, in maples near the Minnesota River.

May 28th — Concluded.

7027. Buteo lineatus ♀ Immature. Had deposited three eggs recently. Measurements on Table. Mrs Hazel. Stomach contained remains of a frog (species not determinable), a stuffed snake ( ) and two eyes, half as large as its own, of some bird, one in upper and the other in lower stomach.

~~7028 Harporhynchus rufus. ad. Parent set of 4 eggs.~~

7028. Turdus (swainsoni?) ♀ad. Measurements on Table.

7029 Empidonax traillii. ♀ad. do

7030 Sylvania canadensis ♂ad. do

7031 " " ♂ad. do

7032 Helminthophila peregrina. ♂ad. Not measured.

7033 " " ♂ad. do

7034 " " ♀ad. Measurements on Table.

7035 Geothlypis trichas ♀ad. do

7036 " " ♀ad. do

7037 Dendroica striata ♀ad. do

7038 Dendroica pennsylvanica ad. do

7039 Geothlypis philadelphia ♂ad. do

7040 Vireo olivaceus. ad. do Iris ~~hazel~~ red; bill dusky plumbeous, except base of mandible which is flesh-color; feet plumbeous; claws horn-color.

7041 Poecetes gramineus ♂ ad. Measurements on Table.

7042 " " ♀ ad. do

May 30th, 1891. Ft. Snelling, Minn.

7043 Ammodramus savannarum passerinus. ♂ ad. Measurements on Table.

7044 Spizella pallida ♀ ad. do

7045 " " ♀ ad. do

7046 Otocoris alpestris praticola ♀ad. do

7047 Dolichonyx oryzivorus ♂ad. do

7048 " " ♀ad.

Dendroica striata. — One male seen.

Ammodramus savannarum passerinus. — First seen; several. Its curious song begins with a shrill chirruping like the tinkling of small silver bells, followed by a buzzing, insect-like sound. It mounts a weed stalk to sing, but this insect-like is frequently uttered in the grass.

May 31, 1890. Ft. Snelling, Minn.

7049 Sturnella neglecta ♂ ad. Measurements on Table.
7050 Ammodramus savannarum passerinus ♂ ad. do
7051 Spizella pallida ♂ ad. do

Otocoris alpestris praticola. – Males seen to mount up high in the sky and flutter singing, as they do in early springtime.

Tympanuchus americanus. – Booming and cackling at ~~dusk~~ ~~sunset~~ and daybreak behind the target range. One bird flushed in the edge of a field. It utters a peculiar cries when it betakes itself to flight.

Xanthocephalus xanthocephalus. – ~~Heard booming and clucking on a sandhill~~ Large flocks were feeding on the prairie farms back of the post at dusk; and they were there again at earliest daybreak; so I suppose they stay there throughout the 24 hours. The females have only been seen present during the past week. They usually keep in separate flocks from the males, though frequenting the same fields, or following the same herds of cows.

This species uproots newly-planted corn, and cuts off the tender blades; later in the season it tears open the ears and eats the milky corn.

Dolichonyx oryzivorus. – The female shot yesterday (May 30) was the first female seen this year.

Coccyzus erythropthalmus } First seen.

June 3, 1890. Fort Snelling, Minn.

839 Arctomys monax. ♂ ad. Measurements on Table. (Not preserved)
7052 Piranga erythromelas. ♂ ad. Measurements on Table
7053 " " ♂ ad. do
7054 " " ♀ ad. do
7055 Habia ludoviciana ♂ ad. } Parents of set 515 do
7056 " " ♀ ad. } of 4 eggs do ♀ with red lining of wings & breast
7057 Melanerpes erythrocephalus ♂ ad. do
7058 Dryobates pubescens. ♂ ad. do
7059 Icterus spurius. ♂ juv. (of last year?) Not measured.
7060 Icterus spurius. ♂ ad. Measurements on Table.
7061 Geothlypis philadelphia. ♂ ad. do
7062 Spiza cyanea. ♂ ad. do
7063 Dendroica striata. ♀ ad. do
7064 Empidonax minimus ♀ ad. do

June 3 — Continued.

7065 Tachycineta bicolor. ♂ ad. Measurements on Table.
7066 Vireo olivaceus. ♀ ad. do
7067 " " ♂ ad. do
7068 Vireo gilvus. ♀ ad. do
7069 " " ♂ ad. do
7070 Troglodytes troglodytes aedon. ♀ pullus. Not measured.
7071 Geothlypis trichas. ♂ ad. Measurements on Table.
7072 " " ♂ ad. do
7073 " " ♂ ad. do
7074 " " ♀ ad. do
7075 Melospiza fasciata. ♀ ad. do
7076 " " ♀ ad. do

The single female of Dendroica striata shot, was the only bird seen to-day that was not known to be a summer resident — the only migrant.

June 7, 1890. Ft. Snelling, Minn.

7077 Chondestes grammacus. ♀ ad. Measurements on Table; parent of set No. $\frac{a}{4}$; snared on nest, which was on ground, surrounded by young shoots of Artemesia _____, in the rear of my quarters.

June 8, 1890. Ft. Snelling, Minn.

840 Geomys bursarius. ♂ ad. Measurements on Table.

To-day I took one set of 5 eggs of Dendroica aestiva, with nest. Yesterday was spent in collecting nests & eggs. I took 61 eggs, as follows: Rallus virginianus. – Incomplete set of 3 eggs.

Zenaidura macroura. – Set of 2 fresh eggs.

* Habia ludoviciana. – 4 sets, 3 of 4 each + 1 of 2 (incomplete, not destroyed)

Hesperiphonus rufus. – One set of 4 – nearly fresh. Large young were seen in one nest, and other birds were still feeding.

Galeoscoptes carolinensis. – One set 4 fresh + one set of 4 incubated

* Spizella pallida. – Four sets, 4 of 4 each + 1 of 3, the latter incomplete

Chondestes grammacus. – Set of 4, slightly incubated.

* Otocoris alpestris praticola. – Set of 4 (not preserved) (one had been broken), much incubated

* Melospiza fasciata. – One incomplete set of 2 eggs.

* Poocaetes gramineus. – One set of 4.

Incomplete sets of Dendroica aestiva were also found, one of which contained 3 eggs.

* Destroyed by a Cat.

June 10, 1890. Ft. Snelling, Minn.

841 Geomys bursarius ♂ ad. Measurements on Table.

June 11, 1890. Ft. Snelling, Minn.

7078 Peterus galbula ♂ ad. Measurements on Table.
Parent of set of 5 eggs.

June 13, 1890. Ft. Snelling, Minn.

7079 Spiza americana. ♂ ad. } Parents of set $\frac{a}{4}$ No. 523.
" 080 " " ♀ ad. } Measurements on Table.
7081 " " ♂ ad. } Parents of set $\frac{B}{4A}$ No. 524.
7082 " " ♀ ad. } Measurements on table.
7083 " " ♀ ad.
7084 Dolichonyx oryzivorus. ♂ ad. } Parents of set $\frac{a}{6.A}$ No. 522. (522).
7085 " " ♀ ad. } Measurements on table.
7086 " " ♀ ad. Measurements on Table.
7087 Geothlypis trichas. ♂ ad. do

Sterna forsteri. – One seen yesterday (June 12th).
Spizella pallida. – An odd egg measures 16.6 X 13.8 mm.
" " A set of 3 eggs, containing embryos was taken, but only one egg could be blown. The eggs measured respectively 16.8 X 12.8; 16.8 X 12.6; 16.5 X 12.2 mm. Neither of these were entered in the egg-book. One of each set preserved. All taken June 11th. Most nests of this species now contain young.

Note to Spilogale phenax. –
Charles Morris, of Fort Verde, Arizona, was bitten by a skunk on the night of May 10, 1890, and died of "rabies mollitica" on the 17th following, his case having been reported in "The New York Medical ~~Record~~ Journal", vol. LII No. 13, Sept. 27, 1890, pp. 344, 345, by Asst. Surg. W. S. Jarvis, U.S.A.

June 17, 1890. Ft. Snelling, Minn.

842 Spermophilus franklinii ♂ jun. Young of year.

June 15, 1890. Fort Snelling, Minn.

7088 Podilymbus podiceps. Pied-billed Grebe. ♂ juv (fullus).
7089 Fulica americana. ♂ ~~ad.~~ fullus. (The most advanced specimen).
7090 " " ♀ ~~ad.~~ fullus (Next to the above).
In these, the bill is yellowish, with indications of a median dusky band. The extreme tip is dusky, with a subterminal spot above of bright orange-red. Legs and feet greenish gray.
7091 Fulica americana ♂ fullus Younger than the above.
7092 " " ♀ " Same brood as above (No. 7091).
7093 " " ♀ " do
7094 " " ♀ " Younger than the above three specimens.
7095 " " ♀ " Younger than No. 7094.
7096 Rallus virginianus, ♀ ad. Measurements on Table.
7097 Aix sponsa ♂ ad. do
7098 Anas discors ♂ ad. do
7099 Sterna forsteri ♂ ad. do
7100 Xanthocephalus xanthocephalus ♂ resting.
7101 Podilymbus podiceps, Pied-billed Grebe just from nest } Eyelid pale vinaceous. Iris pale grayish brown. Bare space around base of bill vinaceous. Bill pinkish flesh-color, spotted with black, and with a pure white sub-terminal spot on maxilla. Legs & feet flaundous.
7102 " " " " " "
7103 " " " " " "

Colors of soft parts: –
Rallus virginianus (7096). Iris reddish brown. Maxilla above & mandible at tip, dusky olive-brown; basal two-thirds of mandible, and sides of maxilla at base, dull orange. Front of bare part of tibia, tarsi, and tops of toes brown; the under side of feet and posterior portion of bare tibia grayish brown.
Aix sponsa (No. 7097). – Eyelid pale yellow. Iris pale brownish yellow. Bill yellow at base; a halberd-shaped area between nostrils, and the tip of maxilla purplish black; sides of maxilla rose-color at base, succeeded by flesh-color. Mandible dusky olive-gray, obscurely mottled with flesh-color. Feet dull yellow, shaded with olive gray on the joints; claws dark plumbeous.
Sterna forsteri (No. 7099). Irides dusky. Bill orange at base, black at tip, legs & feet bright orange (not reddish); the Grebe (Nos. 7101, 7102, & 7103) have a black line down the centre of the ventral surface, corresponding to the median incision.
7104 Xanthocephalus xanthocephalus ♂ ad. } A mated pair, with nest and eggs. Measurements on Table.
7105 " " ♀ ad. }
7106 " " ♂ ad. } do
7107 " " ♀ ad. } (Nos. 7105 & 7107 were not measured).

June 15, 1890 Ft. Snelling Minn
(Continued.)

7108	Fulica americana	♀	taken from nest; recently hatched
7109	Fulica americana	♀	Same brood as above. The others swam from nest leaving an egg from which this specimen was taken
7110	" "	♀	pullus.
7111	" "	♀	pullus
7112	" "	♀	pullus
7113	" "	♂	pullus
7114	" "	♂	pullus
7115	" "	♀	pullus
7116	" "	♂	pullus

Legs & feet greyish flesh brown. Claws plumbeous. Bill deep vinaceous at base, extreme tip black, middle banded with vermilion (?) red, and a pure white protuberance on the ridge of the maxilla, near the tip, between the vermilion and black bands.

Eggs of Fulica americana: —

Set of 8 eggs measuring 48×32; 47×32.6; 47.5×32; 47×33; 47.4×32; 46.5×33; 46×32; 45×32 mm.

Set of 6 eggs measuring 49×33; 52×33.5; 50×34; 51×33; 51.5×33; 50×33.5 mm.

Set of 7 eggs measuring 48×33; 49×33.2; 46×33.8; 46×33; 46×33.5; 46.3×33.3; 48.5×33 mm.

Set of 3 eggs measuring 41×29; 43×30; 43×30 mm.

Set of 2 eggs measuring 51×33; 50×32.8 mm.; fresh; set incomplete, only these two having been laid.

Set of 4 eggs measuring 48.5×32, 49×33.5, 50.5×32, 50×33 mm.

Set of 7 eggs measuring 47×33.5, 46×32, 47×33, 48×33, 46×32, 47.5×33, 49.8×33.

Set of 6 eggs measuring 48.5×33, 46×32, 45.8×31.7, 46.5×31, 47×32, 48×32.5 mm.

Set of 7 eggs measuring 41.5×30, 44×33, 42×32, 45×33.5, 43.5×33.5, 46×33.5, 43×32 mm.

One odd egg. 48.5×33 mm.

One odd egg. 46×32 mm.

June 19, 1890. Fort Snelling, Minn.

7117	Heydrochelidon nigra surinamensis	♀ ad.	Measurements on Table.
7118	" " "	♀ ad.	do
7119	Xanthocephalus xanthocephalus.	♂ ad.	Measurements on Table. Parent of Set No.
7120	" "	♀ ad.	do
7121	" "	♀ ad.	Measurements on Table. Parent of Set No.
7122	" "	♂ ad.	do
7123	Telmatodytes palustris	♀ ad.	Measurements on Table. Parent of Set No.

Eggs of Heydrochelidon nigra surinamensis: —

Set 30/A	3 eggs	measuring	35×25, 34×25.4, 34×26 mm.
Set. B/3	"	"	35×25.7, 35.8×25, 35×25 mm.
Set C/3	"	"	36×25, 35.7×24.4, 35.8×24.5 mm.
Set D/3	"	"	~~35.7×24.4~~ 32.5×25, 32.8×25, 33×25 mm.
Set E/3	"	"	33.5×24, 33.7×24, 33.7×24 mm.
Set F/3	"	"	32.2×24, 33×24, 33.5×24.5 mm.
Set G/3	"	"	~~33×33~~, 33.7×25.3, 32.5×25 mm.
Set H/3	2 eggs	"	32×23.2, 31×23.5 mm., 32×23 mm
Set I/2	"	"	36.1×25, 35.8×24.6 mm., ~~32×23 mm.~~
Set J/1	1 egg	"	32×25.1 mm.
Set K/1	"	"	32.9×23.8 mm.
Set L/1	"	"	36.2×25 mm.

The above 12 sets were taken June 19, 1890, in a shallow pond adjoining the Minnesota River, on the Fort Snelling reserve. Two of them were deserted nests of the Pied-billed Grebe (Podilymbus podiceps), containing, respectively, 2 and 1 egg of the Grebe which had not hatched. The remaining nests were all built by the Terns themselves, resembling grebes' nests in miniature, being small floating heaps of herbage, placed among the growing blades of wild rice or other vegetable debris. The eggs were only raised a few inches above the surface of the water, and, doubtless, most of the nests would rise and preserve their contents should the water in the lake rise higher than its present level. The old Terns made a great clamor, rising from their nests and darting furiously at me whenever I approached. They were built somewhat in colonies, though not more than 3 nests could be seen at any time. The parents of each group would rise up at the first alarm, and

scream overhead until their locality (territory) was passed by, when they would return to their homes, and presently a new set would be flushed from their nests farther on. As it was a rainy afternoon all of the birds were sitting. Often one would be seen to alight beside its sitting mate, or to alight near-by on some little elevation. The sitting birds (doubtless females for the most part) would often dash past near enough to be struck with an oar, screaming loud enough to be heard at considerable distance. Their aërial evolutions were beautiful to witness. When the first nest (Set $\frac{a}{3}$) was found, both birds were shot. At the report all of the local colony assembled and fluttered over their dead comrades, often touching them. They also manifested great concern for the Coots and their orange colored young, but none for their own safety. They would fly to the coots and apparently try to urge them to hasten away which in sooth they were doing as fast as they could. Often too they would flutter over a Yellow-headed Blackbird, but the latter stolidly refused to share their excitement.

Mephitis mephitica. — Description of a Skunk (No. 1080, ♂ad., Oct. 23, 1890) from Fort Snelling, Minnesota.

Body above black, with a narrow white frontal stripe, commencing close to the nose and ending at a point midway between the ears; a broad white nuchal patch, truncate anteriorly, begins behind the ears, narrowing between the shoulders, where it bifurcates into two broad white stripes, which extend along the sides of the body and tail, of which latter it forms the terminal half, these white stripes enclosing a black area which begins acutely between the shoulders and ends obtusely at the middle of the tail; body below black; tail with a long, terminal tuft of white hairs, its under surface being black, with an subterminal, oval, white area, caused by the exposed white bases of the hairs.

Grebe's eggs; measurements, &c.

Set $\frac{B}{2}$. Left in nest. Embryos nearly hatched. Nest used by Hydrochelidon 43.5 X 29.6, 44 X 29.6 mm.

Set $\frac{a}{1}$ " " " from which 3 young (Nos 7101 to 7103) were taken June 15, 1890. 43 X 30 mm.

Set $\frac{C}{1}$ " " " nest used by Hydrochelidon. 46 X 29.5 mm.

Set $\frac{D}{1}$ " " " 45 X 29.9 mm.

June 29, 1890. Ft. Snelling, Minn.

To-day I found a nest of Chrysemys marginata. The female was over the nest which consisted of a hole scooped out with her hind foot. It had an opening of about 75 mm diameter on the surface, but quite a wide cavity was scooped out underneath the surface, in which were ~~five~~ eight (8) eggs, which averaged 31.5 X 19 mm ( ). Others were found laying several weeks ago. One egg preserved.

July 1, 1890. Ft. Snelling, Minn.

Found the following breeding:—

Mniotilta varia,
Vireo flavifrons,
Seiurus naevius.

July 3, 1890 Ft. Snelling, Minn.

To-day found nest of Chrysemys marginata. Either the young had hatched, or the eggs had been eaten by some animal. There were the shells of nine (9) eggs beside the burrow, which was like the one above described.

July 5th, 1890.

Left Fort Snelling and Camped with the National Guard at Camp Douglas, Wisconsin.

Note. I stayed in camp from July 5th to 28th (except from the 20th to 24th when on duty on Retaining Board at St. Paul) at Camp Douglas, Wis. The last half of August and first half of September, 1890 (August to Sept.) were also spent in camp at the same place, I having been on duty with the Division and Army rifle competitions there.

There is a list of the Birds collected ~~on~~ page 168 this volume. Following (pp. 136 + 137) is a list of the mammals collected

(Continued from page 82)

852 Spermophilus tridecemlineatus. ♂ad. July 18, 1890. Camp Douglas, Juneau Co., Wis.
853 Sciurus hudsonius. ♂ad. July 26, 1890. do
854 Tamias quadrivittatus neglectus. ♂ad. do do
855 " " " ♂ad. do do
856 " " " ♂ad. do do
857 " " " ♂ juv. do do
858 " " " ♂ juv. do do
859 " " " ♂ juv. do do
860 " " " ♀ juv. do do
861 " " " ♀ juv. do do
862 " " " ♀ juv. do do
863 Sciurus hudsonius. ♂ad. Aug. 1, 1890. Fort Snelling, Minnesota.
864 Tamias asiaticus neglectus. ♀ad. Aug. 17, 1890. Camp Douglas, Juneau Co., Wisconsin.
865 " " " ♀ juv. do do
866 " " " ♂ young of the year do do
867 " " " ♂ad. Aug. 18, 1890. do
868 " " " ♂ad. do do
869 " " " ♂ad. do do
870 " " " ♀ad. do do
871 " " " ♀ad. do do
872 " " " ♀ These three are nearly fully grown, but show no evidence of having suckled young. The central light stripes are much ~~more~~ less mixed with rufous than in adults. do do
873 " " " ♀ do do
874 " " " ♀ do do
875 " " " ♂ Young of the year. In "woolly" coat. Younger and smaller than the above females, which may be young of the preceding year. do do
876 " " " ♂ do do
877 Sciurus hudsonius. ♀ad. Aug. 19, 1890. do
878 Sciurus carolinensis hypophoenus. ♀ad. Aug. 20, 1890. do
879 Sciurus hudsonius. ♀ juv. do do
880 " " ♂ad. do do
881 " " ♀ juv. Aug. 24, 1890. do
882 " " ♂ad. do do
883 Tamias striatus griseus: ♂ad. do do
884 " " " ♂ juv. do do
885 Sciurus carolinensis hypophoenus. ♀ juv. do do
886 Spermophilus tridecemlineatus. ♂ juv. (Young of the year.) do do
887 Sciurus hudsonius. ♀ juv. Aug. 27, 1890. do
888 Tamias quadrivittatus neglectus. ♂ad. do do
889 " " " ♂ad. do do
890 Tamias asiaticus neglectus. ♀ juv. (has not suckled young) Aug. 27, 1890. Camp Douglas, Wis.
891 Sciurus hudsonius ♀ad. do do
892 Lepus sylvaticus. ♀ad. Aug. 29, 1890. do
893 Sciurus hudsonius. ♂ juv. (probably yg. of year.) do do
894 Tamias quadrivittatus neglectus. ♀ad. (has suckled yg.) do (moulting.) do
895 " " " ♂ do do
896 " " " ♂ ~~♀ juv. (yg. of year.)~~ do do
897 " " " ♀ juv. (yg. of the year.) do do
898 " " " ♀ juv. (has never nursed.) do do
899 " " " ♀ juv. do do do
900 " " " ♀ juv. do do do
901 Sciurus carolinensis hypophoenus. ♀ad. Aug. 30, 1890. do
902 Sciurus hudsonius. ♀ad. (has suckled yg.) do do
903 Hesperomys leucopus. ♂ (ad.?) (sexual organs much developed.) do do
904 Sciurus hudsonius. ♂ (for age see skull.) do do
905 " " ♀ Reddish; has never suckled. do do
906 " " ♀ Grayish. do do do
907 " " ♂ " do do do
908 Hesperomys leucopus. ♂ juv. in gray pelage. do do
909 Sciurus ~~[illegible]~~ niger ♂ad. Aug. 31, 1890. do
910 Sciurus hudsonius. ♀ad. (Suckling yg.; breasts full of milk.) Sept. 1, 1890. do
911 " " ♂ (for age see skull.) do do
912 Lepus sylvaticus. ♀ad. (Nursing; breasts full of milk.) Sept. 3, 1890. do
913 Vespertilio noctivagans. ♀ Sept. 4, 1890. do
914 " " ♀ do do
915 Tamias quadrivittatus neglectus. ♂ (for age see skull.) Sept. 5, 1890 do
916 " " " ♂ do do do
917 Hesperomys leucopus. ♂ad. Sept. 7, 1890. do
918 Lepus sylvaticus ♀ad. do do
919 Sciurus carolinensis hypophoenus. ♀ad. (has suckled yg.) do do
920 " " " ♀ad. do do
921 Sciurus hudsonius. ♀ (see skull for age.) do do
922 Scalops argentatus. ♀ad. Sept. 11, 1890. do
923 Alalpha cinerea. ♀ad. Sept. 16, 1890. Fort Snelling, Minnesota.

Sept. 21, 1890 Fort Snelling, Minn.

924? Sciurus hudsonius. ♀ ad. (Black line scarcely shown.) Teats contained milk. Measurements on Table.
925? " " ♀ juv. Young of the year. Black line faint.
926? Tamias striatus griseus ♂ juv. Probably young of year; see skull for age signs.
927? " " " ♂ juv. (Young of the year.)
7194 Zonotrichia albicollis. ♀ juv. Positively young of the year; the first ...
7195 Geothlypis trichas. ♀ ad. Not measured.

Sept. 22, 1890. Fort Snelling, Minnesota.

928 Sciurus hudsonius. ♀ ad. Has nursed young. Measured on Table.
929 " " ♂ ad. do
930 Tamias striatus griseus ♂ ad. Tail unusually short. do
931 " " " ♀ ad. } all have nursed young. do
932 " " " ♀ ad. do
933 " " " ♀ ad. do
934 " " " ♂ juv. Young of the year.
935 " " " ♀ juv. } None of these have suckled young.
936 " " " ♀ juv.
937 " " " ♀ juv.
938 " " " ♀ juv.
939 " " " ♀ juv.

Bonasa umbellus. - An old male drummed all the afternoon close to where I was shooting all of the above mammals. I chased him up in a dense cover of hazel, but he ran a couple of rods clucking, his note resembling a flicker's when feeding.
Zenaidura macroura. - Still quite common.
Botaurus lentiginosus. - One seen.
Accipiter cooperii } One of each; both are migrating.
" velox }
Bubo virginianus. - One flushed from the cottonwoods
Agelaius phoeniceus } Many large flocks flew over the woods
Quiscalus quiscula } They made a sound like the wind in the treetops with their wings.
Ceryle alcyon. - Common.
Ducks of several species are now very abundant.
940 Vespertilio subulatus. ♂. Little Brown Bat. ♂ Measurements in table, Camp Douglas note book page 8.

Sept. 24, 1890. Fort Snelling, Minn. ~~Camp Douglas, Wisconsin~~

941 Mus decumanus ♀ immature, but has suckled young. Measurements on Camp Douglas notebook, p. 6

Sept. 26, 1890. Fort Snelling, Minn.

942 Mus decumanus ♀ juv. Young of year. Not measured.
943 Blarina brevicauda ♂ ad. Measurements in Camp Douglas notebook, page ... Caught in cyclone trap, baited with meat and apple. Additional measurements — Tip of nose to front teeth, 5. Tip of nose to angle of mouth, 13.5.

Sept. 27, 1890. Fort Snelling, Minn.

944 Blarina brevicauda ♀ ad. Tip of nose to front teeth, 5; to angle of mouth, 13.5. Measured in Camp Douglas notebook, p. 6
945 Tamias striatus griseus ♂ (ad.?) Measurements taken. do
~~946 Mus musculus ♀~~ Not measured.
~~947 Mus decumanus ♂ juv.~~ do

Sept. 28, 1890. Fort Snelling, Minnesota.

Anorthura troglodytes hyemalis. - First seen; one.
Passerella iliaca. - First seen.
Regulus calendula. - First seen.
Antrostomus vociferus. - Last heard Sept. 27, 1890.
Megascops asio. - Heard Sept. 27th.
Falcoscopteis canadensis. - One seen Sept. 20th, morning.
Harpochynchus rufus was seen regularly up to Sept. 13th at Camp Douglas, Wisconsin, but none were seen at Snelling after our return.
Gallinago delicata. - One seen at Snelling Sept. 21st.
Dendroica coronata. - First seen Sept. 15th.

September 30, 1890. ~~Camp Douglas~~ Fort Snelling, Minn.

7196 Sturnella magna ♂ Not measured
7197 " " ♂ do
7198 " " ♂ do
7199 " " ♂ do
946 Arvicola riparia ♂ juv. Total length, 128; Head and body 96. ~~Tarsus~~ tail vert., 35; tail hairs 41. Ear above crown 8.5; pes, 20; ~~[illegible]~~ Skull broken in trap.
947 Lanius L. borealis ♂ juv. Young of year. Not measured.
7200 Anorthura hyemalis ♂ ad. Not measured
7201 Sphyrapicus varius ♀ juv. do
7202 Passerella iliaca ♂ ad. do
7203 Turdus aliciae ♀ ad. do
7204 Helminthophila rufficapilla (ad?) Crown rufous. do

October 1, 1890. Ft. Snelling, Minnesota.

948 Arvicola ♀ ad. Has nursed young.
Total length, 166; head & body, 118; tail vert., 48; tail hairs, 57; ears above crown 9.5; pes, 21; pes width, 4.7; tip of nose to eye, 11; to centre of pupil, 13
Skull crushed in cyclone trap set in runway.
Mammae 4—4. Contained six (6) foetuses, four on one side & two on the other. Stomach distended with bright greenish pulpified herbage. Caught in daytime.
Dendroica coronata. — Still abundant in flocks.
Regulus calendula } Singing occasionally.
Zonotrichia albicollis }
Spinus tristis. — Feeding in immense numbers on hemp.

October 2, 1890. Fort Snelling, Minn.

949 Lanius strictus grisea ♀ ad Has nursed young.
Measurements on Camp Douglas notebook p. 6.
950 Hesperomys leucopus ♂ juv. Not measured.
951 " " ♀ ad. Measurements on regular Table.
7205 Passerella iliaca ♂ (sex not ascertained); not measured.
7206 Dendroica coronata ♀ (ad.?) do
7207 Regulus calendula ♂ (ad.?) do

October 2, 1890. Fort Snelling, Minn.

952 Lorio ♂ Measurements on Table
953 " do
954 " ♂ do
955 " ♀ do
956 Arvicola ♂ short tailed; gray. Measurements on Table
957 Zapus hudsonicus ♂ do

October 3, 1890. Ft. Snelling, Minn.

Junco hyemalis. — First seen; one.

October 4, 1890. Fort Snelling, Minn.

958 Lanius strictus grisea ♂ probably 2nd year. Not measured.
959 " " " ♂ juv. Young of the year. do
960 " " " ♂ juv. do do
961 " " " ♂ juv. do do
962 " " " ♂ juv. do do
963 " " " ♀ ad. Has nursed young. Measurements on Table
964 " " " ♀ juv. Perhaps in 2nd year see skull. Not measured.
965 " " " ♀ juv. do do do
966 " " " ♀ juv. Young of the year do
967 " " " ♀ juv. do do
968 " " " ♀ juv. do do
969 " " " ♀ juv do do
970 Arvicola ♂ juv. do do

Junco hyemalis. — First seen; abundant.
7208 Anthostomus vociferus ♂ ad. Not measured; very fat
7209 Regulus calendula ♀ (ad.?) No ruby crown.
Zonotrichia albicollis } Very abundant
Passerella iliaca }
Bonasa umbellus. — These are quite a number in the vicinity.

October 5, 1890. Ft. Snelling, Minn.

971 Geomys bursarius ♀. Measurements on Table.

972 Geomys bursarius ♀. Measurements on Table.

973 Blarina brevicauda ♂ ad. Measurements on Table. Caught in cyclone trap beside a marsh on Minn. R. bank.

974 Putorius cicognani ♂

975 Mus musculus ♂ ad. Found dead. Not measured.

Melospiza lincolni. – One positively identified. The one I have recognized this fall.

October 6, 1890. Ft. Snelling, Minn.

976 Blarina brevicauda ♀ ad. Measurements on Table. Caught in same place & trap as No. 973.

977 Arvicola _____ ♂ ad. Measurements on Table. Caught in cyclone trap on parade ground.

978 Hesperomys michiganensis ♀ ad. Has nursed young. Measurements on Table. Caught (cyclone) behind targets.

979 Hesperomys michiganensis ♂ juv. Young of the year; not measured

980 " " ♀ juv. quite young. do

981 Arvicola _____ ♂ Measurements on Table

982 " _____ ♀ Has not nursed young. do

The above two were caught in runways in nearly bare ground in the daytime

October 7, 1890. Ft. Snelling, Minn.

983 Blarina brevicauda. ♀. Measurements on Table. Caught in same place and trap as Nos 973 and 976. Bait salt pork.

984 Hesperomys leucopus ♂ juv. Not measured.

985 Arvicola ♀ ad. Has nursed young. Measurements on Table. Caught (contained five (15) foetuses, 4 on one side & one on the other. Mammae 4–6.) on same runway as No. 977, which latter was caught in cyclone baited with fat salt pork, this one having been caught in cyclone trap baited with cheese.

986 Hesperomys michiganensis ♂

987 " " ♂

988 Hesperomys michiganensis ♂ ♀ ♂ juv. Quite young. Not measured. The above three were caught in one place in cyclones baited with fat salt pork and cheese, at night.

989 Sciurus hudsonius ♀ juv. Young of the year? Not measured. Perhaps adult (see skull) Mammae barely distinguishable. Caught in a dense marsh growth, where it had been digging holes,

990 Arvicola ♂ ad. Measurements on Table. Caught in runway where Nos. 981 and 982 were taken yesterday. Caught in bait [illegible] Table. Stomach full of insect larvae which are preserved in alc.

991 Spermophilus tridecemlineatus (Hesperomys tridecemlineatus). ♂ ∧. Not measured. Caught in cyclone.

Coturnicops noveboracensis. – First seen; one flying, and one flushed from ground many times, which latter had a peculiar note different from any I have heard from this species. It may have been one of the other Longspurs; but the bird seen and heard flying overhead was certainly this species.

October 8th, 1890. Ft. Snelling, Minn.

992 Hesperomys michiganensis. ♀ ad. Measurements on Table. This fine old female has recently nursed young. Mammae $\frac{1-1}{2-2}$. The stomach and intestines were so loaded with food (looking like meal & doubtless grass seeds) that I thought she was heavy with young, but such was not the case. She was caught in a runway in wild grass on the target hill – the highest ground about the reservation. Soil very sandy. Calcarius lapponicus was again seen & heard; the same bird (see note above) seen yesterday in same place. Sturnella magna. – Still abundant singing. Melospiza georgiana. – Migrating, [illegible]

October 9, 1890. Ft. Snelling, Minn.

993 Arvicola ♂ ad. Measurements on Table. Caught in same two runways as Nos. 981, 982, & 990 were caught.

994 Mus musculus ♂ juv. Caught in a runway on a prairie. Not measured.

7200 Sorex richardsonii (intermedia?) ♀ juv. 175; 256; 81; 82; culmen 12; tarsus 23; mole 21 [illegible] using factors [illegible]

October 9th — Continued.

995? Spermophilus tridecimlineatus ♂ ad. Measurements on Table.
✓996 Hesperomys michiganensis ♀ juv. Young of the year; not measured. Caught at night on the steps leading up a terrace to my quarters.
7211 Passerculus sandwichensis (alaudinus?) ♂. Not measured.
7212 Zonotrichia albicollis. ♀. Not measured.
7213 Cistothorus stellaris. ♂ ad. Not measured.

October 10th, 1890. Ft. Snelling, Minn.

✓997 Geomys bursarius. ♂ Measurements on Table.
✓998 " " ♀ do
✓999 Arvicola ♀ ad. Caught in cyclone trap, baited with fat salt pork in runway near the two in which Nos. 981, 982, 990 + 993 were captured. Has nursed young. Measurements on Table.
✓1000 Arvicola ♀ ad. Caught in cyclone in parade. Measurements on Tabe. Has nursed young. Contained five fœtuses (4 one side + 1 the other) about as large as peas, which were preserved.
✓1001 Hesperomys michiganensis. ♂ ad Measurements on Table. Caught in a runway on Target Hill.
✓1002 Hesperomys michiganensis. ♀. Has never nursed. Not measured.
✓1003 Hesperomys michiganensis. ♂ quite young. Not measured.

October 10, 1890. Ft. Snelling, Minn.

1004 Putorius cicognani Bonap. ♂ juv. Measurements on Table. Caught in an "Erie Rat-Trap", baited with fat salt pork, set in a runway in a marsh. The same trap + place in which No. 1711 was taken.
1005 Arvicola ♀ juv. Taken in cyclone set in same runway in which No. 999 was caught. Color nearly black above! Measurements on Table.
1006 Geomys bursarius ♂ juv. Young of year; not measured.
1007 " " ♀ juv. do.
1008 " " ♂ ad. Caught in daytime. Several times it covered up my steel trap without getting caught. Measurements on Table.

Hesperomys leucopus. — This morning a Blue Jay carried off one of my cyclones containing the third specimen of this species that I have seen here.

I found the trap at the distance of about two rods and the jays scolded when I took it away from them. Its head was eaten off. It was just showing above the grass-root. I have not seen an adult from this locality yet.

7214 Melospiza lincolni ♂ ad. Caught in a cyclone set in the enclosure at the rifle camp, for mice.

Regulus satrapa. — Have first seen this fall.

Melospiza fasciata
" lincolni
Zonotrichia albicollis
Melospiza georgiana
Passerculus
} All of these are now abundant, and migrating

Spizella pallida. — A bird seen Oct. 9th was supposed to be this species. Several times, of late, I have seen what I thought was this, but still am uncertain as to whether I saw it lately at all, as none were singing.

Junco hyemalis
Passerella iliaca
} ~~Still~~ Common.

October 12th, 1890. Ft. Snelling, Minn.

1009 Geomys bursarius ♀ ad. Measurements on Table.
1010 Putorius cicognani ♂ ad. do

Yesterday I missed five "cyclones" set in a white clover patch under dead wood stalks, on a prairie. On seeing I found 3 of them in the mouth of a small burrow, the mice having been torn out of the traps, in one instance leaving the viscera on the ground. I set a steel trap, baited with Hesperomys leucopus, in the hole and this morning found this weasel caught by both hind feet and dead in the trap. Measurements on Table.

1011 Mus musculus ♂ ad. Caught in a "Cyclone" set in a mouse.

Strepsilas cedrorum. — A flock seen.

Pipilo erythrophthalmus. — A female seen.

Oct. 14, 1890. Ft. Snelling, Minn.

1012 Geomys bursarius ♀ im. Niffles of [illegible] rather large. Possibly may have nursed young, but its size would indicate an animal of the year.
Some measurements on Table. There is much more white about lower parts anteriorly than common; this color (white) covers the lower jaw & cheek-pouches and thence backward to the zyphoid cartilage and laterally nearly to the fore feet (forming a large white cross). The vent, terminal two-thirds of tail, and both fore and hind feet are white, as is the end of the snout above for a considerable distance; the white extends on the fore limb back to the olecranon below and about half as far above.

1013 Hesperomys leucopus. ♂ im gray coat (very slightly changing) but nearly adult, the sexual organs being very much enlarged. (Some measurements on Table.) Caught in Minnesota River bottom. Its tail is a little short (?) for leucopus, but its slenderness and scant hair, together with its long hind foot show that it is not michiganensis, as does the color of head & body, alone.

1014 Blarina brevicauda ♀ ad. Measurements on Table. Caught in a marsh, in Minnesota River bottom.

1015 Blarina brevicauda ♀ juv. Young of the year; not measured; taken near the above adult.

~~1016 Mus musculus juv. not measured; caught on Target [illegible]~~

Oct. 15, 1890. Ft. Snelling, Minn.

1016 Spermophilus tridecemlineatus ♀ im. Has not nursed young. Not measured. Caught in steel trap, baited with salt pork.

1017 Hesperomys michiganensis. ♂ juv. Young of the year.

1018 Arvicola ——— ♂ Measurements on Table.

1019 " " ♀ juv. Mangy. Not measured.

1020 " " ♂ Measurements on Table

1021 " " ♀ ad. Has nursed do

Lanius borealis. - First seen; one.
Spizella monticola. - First seen; several.
Scolecophagus carolinus. - In flocks.
Carpodacus purpureus. - A flock of about 250 flew over, first in straggling bands, flying low in high wind.

Oct. 16, 1890. Ft. Snelling, Minn.

1022 Geomys bursarius. ♂ ad. Measurements on Table. Claws horn-color.

1023 Geomys bursarius. ♂ juv. Young of year; not measured.

1024 " " ♀ juv. do

1025 Putorius cicognani. ♀. Measurements on Table. Claws color-less at tip, flesh-color at base. Caught in "Erie Rat-Trap", set in marsh, baited salt pork.

✓1026 Arvicola ——— ♂ juv. Young of year; not measured on table, but see next page

✓1027 " " ♀ juv. do do

✓1028 " " ♀ juv. do do

✓1029 Hesperomys michiganensis ♀ juv. do do

✓1030 " " ♀ im. Has never nursed. do (Nearly adult pelage)

✓1031 " " ♂ im. do killed by striking flagstaff; fully adult.

7215 Ammodramus leconteii ♂ ad. Measurements on Table. Sides hazel. Bill with maxilla light brown, mandible horn-color. Tarsi flesh-color; feet pale brown; claws horn-color, ~~[illegible]~~ with a dusky streak in the middle.

Spizella monticola. - Very common in flocks.

Buteo (or Archibuteo?). - A white-breasted Hawk flew over parade & chased a flicker (C. auratus). Breast almost pure white & perhaps tail also, but I could not see the latter plainly.

Zonotrichia albicollis. - Nearly all have departed.

Sciurus ~~[illegible]~~ niger cinereus. - Last seen (the day I shot a lot of Chipmunks). It probably left shortly after that.

Xanthocephalus icterocephalus. - All had departed before Oct. 14 (Oct. 14) from Lincoln.

Agelaius phoeniceus. - Flocks composed of females are common, and a few scattered males.

Scolecophagus carolinus. - Immense flocks.

Calcarius lapponicus. - Common in flocks, and singly. One sat close to me in tops of [illegible] chirping like bluebirds (Sialia sialis) & [illegible] note - only one syllable & shorter, however.

Porzana ——— (Yellow Rail)??? - A small rail flew up in marsh close to me Oct. 11. May possibly have been the Virg. Rail; not Sora or Virg. Rail.

Oct. 16th — Continued

Arvicola — The Gray Field Mice (Nos. 1026, 1027, + 1028) trapped to-day were apparently all young of the year, and had the muddy color to tips of hairs below, which is peculiar characteristic of the young. All were trapped together in a white clover patch in dead weeds on Target range. No. 1026 has an exceptionally long tail. Measurements —

1026 Tail vert., 34 ; hind foot, 18 ; total length, 126 . mm.
1027 " " 28 ; " " , 16.5 ; " " , 119 . "
1028 " " 26 ; " " , 16.5 ; " " , 113 . "

Hesperomys michiganensis. Measurements. —

1030 Tail vert., 47 ; hind foot, 17 ; total length, 132 . mm.
1031 " " , 50 ; " " , 17.5 ; " " , 126 . "

The above two are in nearly adult pelage.

Oct. 17, 1890. Ft. Duelling, Mexico.

✓1032 Arvicola ——— ♂ juv. Young of year. Very fulvous.
✓1033 Hesperomys michiganensis. ♂ im. } The pelage begins to show
~~1034~~ " [Escaped] " ♂ im. } signs of adolescence
✓1035 " " ♂ im.
✓1036 " " ♀ im. } do
✓1037 " " ♀ im.
✓1038 " " ♀ im.
✓1039 " " ♀ ad. Has nursed young. Measurements on Table. This, if true michiganensis, is the extreme red phase. Perhaps, with No. 978, it may be a different species from michiganensis, having a redder coat, and longer hind-foot, though the pattern is not nearly as large as in H. leucopus of this region. The tail, in these two specimens, is not as sharply bicolor as in the other specimens of michiganensis. All of my specimens of michiganensis were trapped in cyclones on Target hill, but one that was found dead on the range close by.

✓1040 Hesperomys leucopus ——— ♀ ad. Has nursed ——. Mammæ $\frac{1-1}{2-2} = 6$. Measurements on Table. Caught at the farther range house, in a little wood of mixed cotton-

✓1041 Hesperomys l. ——— ♀ juv. Young of the year. Probable the progeny of No. 1040, with which it was caught.
✓1042 Hesperomys l. ——— ♂ ad. A very red specimen; face eaten in trap (by shrew?), a small and singular specimen with shortish foot, and long, but very sharply bicolored tail; the black tail stripe narrow, showing white on each side when viewed from above. Measurements on Table.

✓1034 Spermophilus tridecimlineatus. ♂ im. Probably yg. of year. Not measured.
✓1043 " " ♂ do do
✓1044 " " ♂ do do
✓1045 " " ♂ ad. Measurements on Table.
✓1046 " " ♂ ad. do
The last two have fuller tails
✓1047 Geomys bursarius. ♀ juv. Young of the year; not measured. Caught on Target Hill in steel trap.

7216 Sialia sealis. ♂ ad. (Oct 17). Not measured
7217 " " ♂ ad. do
7218 " " ♀ ad. do
7219 Melospiza georgiana ♂ do
7220 Zonotrichia querula ♂ (im.?) do
7221 " " ♂ (im.?) do
7222 Melospiza lincolni. ♂ do
7223 " fasciata. ♂ ad. do
7224 " lincolni ♀ (ad.?) do
7225 Spizella monticola. ♂ do
7226 Sturnella neglecta ♂ ad. Typical neglecta; very fat.

Skulls of large mammals put in the Am. Museum:—

1 Coyote. — 20 skulls, + 3 of them with complete skeletons. Arizona.
2 Mountain Lion. — 18 skulls, + 1 of them a complete (?) skeleton. Arizona.
3 Lynx (baileyi ?). — 23 skulls, one of them a complete skeleton, and another a nearly complete skeleton. Arizona.
4 Foxes. — 4 skulls.
5 Bears. — 10 skulls.
6 Antelope + Deer (besides those crated with the Elk) 17 skulls.
8 Beaver. — 30 skulls (some broken), including 2 complete skel-
=etons; all from Arizona.

Extract from letter to Dr. J. A. Allen. Oct. 18, 1890.

I made a blunder in naming my Arctic Deer Mouse (Mus. Bull., p. 285). My name "arcticus" was written on the labels of specimens [of typical leucopus (fide Preble) from Labrador] by M. De Sausse, and I have thus printed the name, informally, at the bottom of page 68. I will change it to borealis if the latter name has never been used. I am going to do some work on H. leucopus of this region, and will probably name a new race, in connection with my Wisconsin paper.

In the Museum Bulletin, p. 285, I subdivided what Coues broadly characterized as H. l. sonoriensis into six subspecies, treating only of the forms inhabiting the central portions region of the continent, and restricting Le Conte's H. sonoriensis to the common form inhabiting the higher (wooded) portions of Arizona, New Mexico (see especially Baird, p. 475, 476), and Sonora, naming, as my "type of diagnosis" No. 2357 Mus. Coll. (duplicate type, Dr. M. would call it). This specimen came either from San Francisco Mountain or Baker's Butte, Ariz. (in either case the same as Merriam's lately-described subspecies H. l. rufinus (see N. Am. Fauna, 3, p. 65).

Merriam's rufinus (my sonoriensis) is the common mountain (woodland) form of H. l. all over Arizona. I found it at Verde, Whipple, all over Mogollon & San Francisco Mt. Baird describes it, if I mistake not, from Ft. Thorne, N. M. (p. 475).

Le Conte's type of "sonoriensis" was collected in the mountains of Sonora. It was a young specimen in gray pelage, hence not positively referrable to any particular subspecies, unless the skull & teeth should be found, if still extant, to possess specific or subspecific characters. I am quite sure, however, that I was right in identifying my specimens (& Merriam's rufinus) with Le Conte's sonoriensis for this reason: This type (No. 146 Mus. Smiths.) was collected by J. H. Clarke, who also collected, in the same locality, another specimen (No. 5444) which Coues

could not distinguish from leucopus (see in column of "remarks" in table on p. 81). Merriam says of rufinus "I have compared the San Francisco Mountain White-footed Mouse with nearly a thousand specimens from various parts of North America, and find that it resembles closely resembles the form inhabiting the Adirondack region in northern New York." I have a specimen from Ft. Verde which I cannot distinguish at all from Long Island N. Y. specimens of leucopus; but my Baker's Butte and San Francisco Mountain specimens are sufficiently distinct to merit subspecific recognition.

I was quite as desirous of naming a new race as Dr. M.; but the records were against it, Clarke's adult specimen from Sonora having been almost indistinguishable from true leucopus and consequently similar to what I call sonoriensis and what Dr. M. calls rufinus.

Oct. 18, 1890. Ft. Snelling, Minn.

✓1048	Hesperomys michiganensis	♀ ad.	Measurements on Table.
✓1049	Hesperomys l. ———	♀ ad.	Measurements on Table.
✓1050	Geomys bursarius	♂	Measurements on Table
✓1051	Geomys bursarius	♂	Measurements on Table
✓1052	Putorius	♂	Measurements on Table

Oct. 19, 1890. Ft. Snelling, Minn.

✓1053	Hesperomys leucopus ———	♂	Measurements on Table.
	Shedding; back gray, sides yellowish brown. Caught Minn. bottom		
✓1054	Hesperomys leucopus ———	♀ ad.	Measurements on Table.
	Caught oak woods at further Target Range House.		
1055	Hesperomys michiganensis.	♀ jun.	Quite young. Not measured.
1056	Arvicola	♀ jun.	do do
7227	Zonotrichia querula	♂ (ad.?)	The wounded one. do
7228	"	♂	do
7229	Spizella monticola	♀ ad.	do

Oct. 20, 1890. Ft. Snelling, Minn.

1057 Hesperomys L. ——— ♂ juv. Not meas.
✓1058 " " " ♀ juv. do
1059 " " " ♂ ad. Measurements on Table. Red coat.
✓1060 Hesperomys michiganensis ♀ ad. do do
1061 Sorex ♂ ad. Measurements on Table
✓1062 Arvicola ♀ Has never nursed. Not measured.
✓1063 Hesperomys michiganensis. ♂ nearly ad. Intermediate pelage do
✓1064 " " ♂ younger. do do
✓1065 " " ♂ " do do
✓1066 " " ♀ " do do

Zonotrichia albicollis. – Several seen; one shot.
Zonotrichia querula could not be found to-day. Two were shot yesterday.
Melospiza lincolni. – A few still present; one shot; a few days ago very abundant.
Spizella monticola
Junco hyemalis } Very abundant.
Melospiza fasciata
Sialia sialis. – None seen; of late large flocks have been noted
Falco sparverius. – One on Tang. & Rang.
Calcarius lapponicus. – In flocks; common.
Melospiza georgiana. – Only one seen; abundant lat. Common lat.
Sturnella sp?. – Not noted since the last Dec. of migration.
Passella iliaca. – One seen yesterday; not seen to-day.
Regulus satrapa
Certhia familiaris } Common.
Corvus americanus. – Flocks seen migrating daily.
1198 Tamias striatus quinquevittatus ♂ juv. Not measured.
7230 Zonotrichia albicollis. ♀. Not measured.
7231 Melospiza lincolni. ♀ do.

Oct. 18, 1890. Ft. Snelling, Minn.

✓1067 Sciurus hudsonius ♂ ad. Measurements on Table.
Skull only preserved.

Oct. 21, 1890. Ft. Snelling, Minn.

Dendroica coronata. – One small flock at Mendota.
Bonotrichia albicollis. – Several in Minn. – R. Bittor.
✓1068 Mus decumanus ♀ ad. Has nursed young.
Measurements on Table.
✓1069 Chaetodipus trideciminiatus ♂. Not measured.
Caught in steel trap set in front of burrow.
✓1070 Blarina brevicauda ♂ ad. Measurements on Table.
✓1071 Hesperomys leucopus ♂ ad. Measurements on Table.
✓1072 Arvicola ——— ♂ juv. Yg. of the year. Not measured.
✓1073 " ——— " ♂ fully adult. Total length, 140; Head and body, 109; tail vert, 33; ear from crown, 5.5; hind foot, 17.
✓1074 Chaetodipus trideciminiatus ♂. Not measured.
Caught in steel trap set at burrow.

Oct. 22, 1890. Ft. Snelling, Minn.

7232 Turdus aonalaschkae pallasi ♂ ad. Not measured.
✓1075 Hesperomys L. ——— ♀ ad. Measurements on Table.
✓1076 Sorex personatus. ♀ ad. do
Caught in a mouse trap set in the reeds of a marsh.
✓1077 Hesperomys L. ——— ♀ juv. Yg. of year; not measured.
✓1078 Hesperomys michiganensis. ♀ juv. do do
✓1079 Sciurus hudsonius ♂. Not measured.
Hermit Thrush. – Several seen.
Scolecophagus carolinus. – Numerous flocks.
Corvus americanus. – One flock.
Passerella iliaca. – Scarce; one small flock.
Melospiza georgiana could not be found today.
Melospiza lincolni. – A few seen.
Merula migratoria. – One bird; and in flocks at another place were all seen.
Sialia sialis. – One large flock.
Spizella monticola. – Utters a twittering warble, which is a really pleasing song.
Zonotrichia querula could not be found.
Zonotrichia albicollis. – A small flock.
Certhia familiaris
Regulus ~~calendula~~ satrapa } Several of each.

104

Oct. 23, 1890. Ft. Snelling, Minn.

1080 Mephitis mephitica. ♂ ad. Measurements on Table.

1081 Neotiurus hudsonius ♀ juv. Has not moulted young. Not measured. Changing to winter coat.

1082 Lynx rufus. ♀ [illegible]

1083 Arvicola ♀ juv. Not measured.

1084 Hesperomys michiganensis ♀ juv. Yg. of year do

7233 Sitta carolinensis ♂ ad.

Passerella iliaca. – Several, in different places.

Merula migratoria. – A number seen.

Dendroica coronata. – A number seen.

Melospiza lincolni. – Only one seen.

Junco borealis. – One seen.

Zonotrichia albicollis. – Several seen.

Spizella dialis. – In flocks.

Melospiza georgiana, Zonotrichia querula, Regulus satrapa } None could be found.

Scolecophagus carolinus. – In large flocks.

Agelaius phoeniceus. – do

On Oct. 20th I saw a large flock of what I not have from Quiscalus or S. cyanocephalus.

Corvus americanus. – One flock.

Circus hudsonius. – One adult (blue). Stood still in air & held head away down when searching for its prey.

Oct. 24, 1890. Ft. Snelling, Minn.

1085 Arvicola ♂ Target Hill. Not measured.

1086 " ♂ juv. Target ground.

1087 Hesperomys michiganensis ♂ juv. Yg. of year; not measured.

1088 " " ♂ juv. do do

1089 Sturnella neglecta. – One. ♀ do do

Dendroica coronata. – One seen.

Melospiza lincolni. – One seen.

Passerella iliaca. – Several seen.

Zonotrichia albicollis. – Several.

Junco hyemalis. – [illegible]

Oct. 25, 1890. Ft. Snelling, Minn.

1090 Crotonys gapperi Vigors. ♀ has not nursed young. Measurements on Table. Caught at root of willow tree in edge of marsh, near Minnesota River.

1091 Hesperomys michiganensis. ♂ juv. Yg. of yr. Not measured.

1092 Blarina brevicauda ♂. Measurements on Table. Caught on a high, dry, sandy hill surrounded by prairie.

1093 Lanius borealis ♀ juv. Yg. of year. Caught on Land Heitl. Not measured.

Sturnella neglecta. – One seen.

Melospiza fasciata. – A few seen.

Corvus americanus. – Several in a flock.

[illegible] – Several.

Scolecophagus carolinus. – In flocks.

Oct. 26, 1890. Ft. Snelling, Minn.

1094 Blarina brevicauda ♂ ad. Measurements on Table.

1095 Arvicola ♂ juv. Yg. of year. Not measured.

1096 " ♀ has not nursed.

1097 Hesperomys michiganensis. ♀ juv. Yg. of yr.; not measured.

Spizella monticola, Junco hyemalis } The only sparrows [illegible]

Agelaius phoeniceus. – Still common.

Oct. 27, 1890. Ft. Snelling, Minn.

1098 Hesperomys michiganensis. ♂ Two measurements on Table.

1099 " " ♀ juv. Not measured.

[illegible]

Oct. 28, 1890. Ft. Snelling, Minn.

1100 Hesperomys michiganensis ♂ juv. Yg. of year; not measured.

1101 Sorex ♀. Measurements on Table. Caught amongst the flags of a marsh beside Minnesota River.

Oct. 29, 1890. Ft. Snelling, Minn.

1102 Hesperomys l. ♂ ad. A very strongly fulvous specimen, possibly distinct from the other form of leucopus found here. Caught at the foot of a willow-tree, near the Minnesota River. Measurements on Table.

1103 Sorex Cooperi ♂ Measurements on Table. Caught under a log in the edge of a marsh near the Minnesota River. Trap (cyclone) baited with salt pork.

1104 Arvicola ♂ im. Caught in cyclone, baited with salt pork. Measurements - 5th and last - [illegible] Not meas'd.

1105 Hesperomys nuchalis ♂ im. Caught in hill, not measured.

Sialis sialis. - One small flock.

Merula migratoria. - Several.

Branta canadensis. - One flock (above) with flock of ducks flying with them.

Oct 30, 1890. Ft. Snelling, Minn.

1106 Sorex cooperi ♀. Measurements on Table.

1107 Hesperomys l. ♀ ad. do

Caught at base of willow tree near Minnesota River.

1108 Arvicola ♀ im. Measurements on Table. Sewer & wood hatch on target range.

Oct. 31, 1890. Ft. Snelling, Minn.

1109 Sorex cooperi ♂ ad. Measurements on Table. Caught in cyclone in marsh near Minnesota River.

1110 Hesperomys l. ♀ ad. Measurements on Table. Caught same place as No. 1107.

Spinus tristis } Seen in considerable numbers in
Merula migratoria } Minnesota River Bottom.

Rallus virginianus. - One at outlet of marsh into Minn. River.

2 November 1, 1890. Ft. Snelling, Minn.

1111 Hesperomys l. ♂ ad. Measurements on Table. Caught with Nos. 1107 + 1110 in Minnesota River-bottom.

Merula migratorius. - A number in Minn. R. bottom.

Spinus tristis. do

Melospiza fasciata. - But one; Minnesota R. marsh.

Pinicola enucleator. - Several seen on Miss. River.

2 Nov. 2nd, 1890. Ft. Snelling, Minn.

[illegible] Beside the entire [illegible] leucopus. ♀ ad. Measurements on Table.

[illegible] c. hypophorus. ♂ ad. The old example. Measurements [illegible] White below, [illegible] of fingers, scrotum, neck & very narrow median stripe [illegible] Table. White [illegible] (mostly) below; a [illegible]

1113 Mus c. hypophorus ♂ Testicles abortive or under-developed. Very gray above & all [illegible]

Nov. 3, 1890 Ft. Snelling, Minn.

1114 Hesperomys l. ♀ ad. Has suckled [illegible] This is another example of the extreme development [illegible] mouse in rich golden brown coat. Measurements [illegible] Table. Caught in grape-vine thicket around stump [illegible] willow-tree, near Minnesota River. Mammae $\frac{1-1\ 0\ 2}{2-2}$ [illegible]

[illegible] ♂

Merula migratoria. - A small flock near Minn. River.

Ceryle alcyon. - Two on Minnesota River.

2 November 4, 1890. Ft. Snelling, Minn.

1119 Hesperomys l. ♂ im. } Yg. of year, getting
1120 " l. " ♀ im. } on sides. Not in [illegible]

7234 Larvivora brevirostris ♂ (ad.) Measurements on Table.

[illegible]

Coccothraustes vespertina. - First [illegible]

[illegible]

Picoides [illegible]

[illegible] in a [illegible] [illegible] Mississippi River bottom. [illegible] [illegible] attracted a flock of robins (Turdus migratorius), [illegible] by a hawk or owl. I returned for a gun [illegible]

7235 Lanius borealis ♂ ad. Measurements on Table. Stomach contained remains of grasshoppers.

✓1124 Cistothorus [illegible] ♀ ad. Skull, [illegible] Measurements on Table. [illegible]

✓1125 Blarina [illegible] ♀ ad. [illegible] Measurements on Table. [illegible]

November 6, 1890. Ft. Snelling, Minn.

✓1126 [illegible] ♀ im.

✓1127 [illegible] ♀ im. Just getting [illegible] on sides.

1125 Blarina brevicauda. ♀ ad. Measurements on Table.

7236 Lanius borealis ♂ ad. Measurements on Table. Stomach contained remains of grasshoppers.

7237 Scolecophagus carolinus ♀. Not measured.

7238 Bubo virginianus. ♀ ad. Measurements on Table.

November 7, 1890. Ft. Snelling, Minn.

[illegible] carolinus. — Three seen.

Scolecophagus carolinus. — Several flocks seen.

✓1126 Asperomyas [illegible] ♂ im. Some fulvous; not measured.

✓1127 " " " ♀ jun. Yg. of year; all in gray coat; not measured.

November 8th, 1890. Ft. Snelling, Minn.

✓1128 Blarina brevicauda. ♂ ad. Not measured.

Agelaius phoeniceus. — Four seen on Miss. R. bank.

November 11, 1890. Ft. Snelling, Minnesota.

7239 Cyanocitta cristata ♀ ad. Not measured.

Scolecophagus carolinus. — A flock of about [illegible] or.

1129 Lepus sylvaticus ♂ ad. Measurements on Table.

1130 Mus musculus ♂ ad. [illegible] 155; tail 95; h. ft. 19. Shot Nov. 12.

7240 Rallus virginianus. ♀ ad. Measurements on Table.

November 12, 1890. Ft. Snelling, Minn.

7241 Cyanocitta cristata. ♂ ad. Not measured.

1131 Asperomyas leucopus ♂ im. Not measured.

1132 Sciurus hudsonius. ♂ ad. Measurements on Table.

Agelaius phoeniceus. — Several seen.

Nov. 13, 1890. Ft. Snelling, Minn.

7242 Gallinago delicata ♀ ad. Measurements on Table.

7243 Cyanocitta cristata ♀ ad. Measurements on Table.

Asperomyas leucopus ♂ im. Not measured.

Nov. 14, 1890. Ft. Snelling, Minn.

Spinus tristis. — Small flocks; singing.

Melospiza fasciata. — One seen in warm sheltered place.

Corvus americanus. — A couple seen; a few seen or heard daily of late.

Scolecophagus ferrugineus. — A pair (♂ + ♀) seen by River.

Nov. 15, 1890. Ft. Snelling, Minn.

7244 Cyanocitta cristata ♂ ad. Measurements on Table.

Scolecophagus carolinus. — One seen.

Lanius borealis. — One seen.

Spizella monticola } growing rather uncommon.
Junco hyemalis }

November 16, 1890. Ft. Snelling, Minn.

Porzana carolina. — A Rail flew up close to me & was shot (& wounded?) but could not be found. Possibly it may have been a Yellow Rail, but certainly not a

Nov. 16, 1890 — Concluded

Virginia Rail.
Gallinago delicata. — One seen.

Nov. 17, 1890. Ft. Snelling, Minn.

✓1133 Hesperomys l. _____ ♂ juv. gray coat; not measured.
Turdus americanus. — Two seen.
✓1134 Lepus sylvaticus ♂ (ad.?) Not measured.

November 18, 1890. Fort Snelling, Minn.

✓1135 Plectrophenax nivalis ♀ ad. Measurements on Table.
Spinus tristis. — Still abundant.
Calcarius ornatus. — Heard overhead.
Spizella monticola. — Quite numerous.

On November 17th 1890. I sent a box in care of Mr. Robert Ridgway, containing all the birds borrowed from the Smithsonian and Am. Mus. N.H. last spring, and the following birds to the American Museum: — Plectrophenax nivalis: Nos. 6697, 6692, 6694, 6698, 6699, 6700, 6695, 6701, 6737, 6735, 6733, 6736, 6732, 6731, 6734, 6693, 6738. Seventeen specimens.

In the same box were sent thirteen birds to Audubon Ridgway, as follows: —
Pocecetes gramineus — 6726, 6725, 6727, 6729, 6730, 6728.
Calcarius lapponicus. — 6690, 6756, 6711, 6718.
Plectrophenax nivalis. — 6696, 6701.
Icterus spurius. — 6706.

November 19, 1890. Ft. Snelling, Minn.

Colinus virginianus. — A flock of about 6 seen.

November 20, 1890. Ft. Snelling, Minn.

✓1136 Hesperomys michiganensis. ♀ (ad.?) Not measured.
✓1137 Blarina brevicauda ♂ ad. Not measured. Mated with No. 1136, or, at least, caught in same tunnel.
✓1138 Putorius erminea. ♂ ad. Measurements on Table. Pure white, except a few brown hairs of summer coat

coat on back, which are all ready to drop out, and a slight yellowish tinge on inner side of thighs which deepens to sulphurous on under side of tail, which latter is tipped with blackish for about 40 mm.

7245 Cyanocitta cristata ♂ ad. Measurements on Table. This is the second Blue Jay that I have caught in Erie Rat-Traps. Small for a male.
Corvus americanus. — One pair.
Carpodacus purpureus. Several seen; singing. About a fortnight ago I saw several, but was not quite certain of the identification then.
Spizella monticola. — Common.
Junco hyemalis has not been seen for several days.
Certhia familiaris. — One seen.

November 21, 1890. Ft. Snelling, Minn.

✓1139 Hesperomys michiganensis ♀ im. Not measured.
Spinus tristis. — In flocks of about 20 or less.
Plectrophenax nivalis. — First seen. One seen at Stone quarry.
Calcarius lapponicus. — In flocks, common.
Pocecetes gramineus. — Heard.

November 22, 1890. Ft. Snelling, Minn.

1140 Blarina brevicauda. ♂ ad. Measurements on Table.
1141 Hesperomys michiganensis ♂ ad. do Target line.
7246 Colinus virginianus ♂ ad.
7247 " " ♀ ad.
7248 " " ♀ ad.
} Measurements on Table.
✓1142 Lepus sylvaticus ♀ im. Probably y.p. of year; not measured.
No Juncos seen for several days (since last noted).
Spizella monticola. — Has been common, but not very abundant during the past fortnight. Weather for the past few days has been quite warm and pleasant.
Sitta carolinensis. — Flock of ten to twenty together.
Carpodacus purpureus. — Flock of five seen.
Colinus virginianus. — Flock of 30. Old male shot on guard in willow tree, whereupon the flock flew up.

Nov. 20, 1890. Ft. Snelling, Minn.

✓1148 Pitorius _____ ♀(ad.?) Partial measurements on Table.

This specimen was given me by a farmer, on Nov. 23rd. He said his cat caught it in his barn on the 20th, and mutilated it badly. When I got it, the front of the head and hind quarters, connected by a narrow strip of skin were all that was left of it. Except the black tip of tail, and a sulphury suffusion to tail it was all white.

This man trapped a brown one of this species, a few weeks ago, in a Geomys bursarius' burrow.

Nov. 23, 1890. Ft. Snelling, Minnesota.

1144 Arvicola _____ ♂(im.?) Measurements on Table.

Caught in weed-patch on target-range.

1145 Heesperomys michiganensis ♀ im. Not measured.

1146 " " ♂ im. Not measured.

1147 Blarina brevicauda ♀ ad. Measurements on Table.

1148 " " ♀ im. Not measured.

Corvus americanus. — heard once.

Carpodacus purpureus. — Several flocks.

Calcarius lapponicus. — Many large flocks.

Spizella monticola. — Quite scarce.

Spinus tristis. — Rather common in good sized flocks.

November 24, 1890. Ft. Snelling, Minn.

1149 Sorex Cooperi ♀ Measurements on Table.

Carpodacus purpureus } Common.
Spinus tristis }

Spizella monticola. — Scarce.

Nov. 25, 1890. Ft. Snelling, Minn.

✓1150 Geomys bursarius ♀. Measurements on Table.

7249 Cyanocitta cristata ♂ ad. do Caught in Erie R.R.

Nov. 26, 1890. Ft. Snelling, Minn.

7250 Cyanocitta cristata ♂ ad. Measurements on Table.

✓1151 Blarina brevicauda ♂ ad. do

Nov. 27, 1890. Ft. Snelling, Minn.

✓1152 Heesperomys michiganensis ♀ ad. Measurements on Table.

✓1153 " " ♀ juv. Not measured.

Spizella monticola. — Scarce.

Spinus tristis. — Still common. Weather warmish and ground again bare. We had a heavy snow the last Saturday in October which lasted about [illegible] the open places, a little still lying in the [illegible].

Calcarius lapponicus. — Abundant.

Carpodacus purpureus. — A few. They are very restless & active.

Nov. 28, 1890. Ft. Snelling, Minn.

✓1154 Sorex cooperi ♀ Measurements on Table.

✓1155 " cooperi ♀ do

✓1156 Mus musculus ♂ ad. do Caught on edge of marsh.

✓1157 Heesperomys michiganensis ♂ im. Not measured Target hill.

✓1158 Heesperomys l. _____ ♀ ad. Measurements on Table Stone quarry ravine

✓1159 " " ♀ ad. do do

✓1160 Arvicola pinetorum ♀ ad. do Parade ground.

✓1161 " " ♀ ad. (Caught with the above.) Not measured. do

✓1162 Arvicola austerus ♂ ad. (Caught near the above.) Measurements on Table. do

✓1163 " " ♀ juv. (Caught near the above.) Not measured. do

✓1164 " " ♂ juv. do do do

✓1165 " " ♀ juv. (Caught on Target Hill.) do do

7251 Spinus tristis ♀ ad. Measurements on Table.

7252 Cyanocitta cristata ♂ ad. do Caught in Erie Rat Trap

7253 " " ♂ ad. do Shot.

Description of two species of Arvicola: —

Arvicola (pinetorum). No. 1160, ♀ ad., Ft. Snelling, Minn., Nov. 28, 1890.

General color of upper surface rusty brown, except the tail, which is blackish above; it is bicolor and darker than the body. The longest vibrissæ extend back to the shoulder, and are mostly clorless; ~~a few~~ some blackish at base. The under fur is very dense and of a plumbrous-black color, showing through in places. A few of the longest hairs are broadly tipped with jet black, their bases being plumbrous like the under fur. Below the pelage is gray, with hoary tips to the hairs. The ~~patterns~~ colors of the upper and under surfaces are rather sharply contracted. Fore and hind feet grayish, strongly tipped with light-brown. Mammæ $\frac{4-4}{4-4} = \frac{8}{8} = 16$.

(Nov. 28 — Concluded.)

No. 1161 ♀ juv. (Young of the year.). differs from the preceding in being ~~paler~~ less ferruginous above, and with darker feet and tail. The upper surface lacks the broad rusty tips to the long hairs, which have a faint wash of fulvous (not ferruginous) along the sides & anteriorly, while the back is dusky.

Arvicola (austerus?) No. 1162 ♂ ad. Ft. Snelling, Minn. Nov. 28, 1890. Coat much shorter and ~~more so~~ stiffer than in the above species. The ears are flesh colored, and very scantily haired, while riparius has relatively larger, dark colored, heavily furred ears. The same differences in color size and furriness pertain to the feet. The tail is much shorter in austerus, while it also differs in being concolor with the body above & below, and in having the hairs of its upper surface mixed with gray instead of being uniformly dark as in riparius. The whiskers are shorter, not reaching back to the shoulder. ~~The under coat~~ Color. — The under coat is plumbeous black above, gray below. Above grizzled, with an admixture of black, gray and pinkish, the blackish predominating in the median line, Below gray with ~~no a external~~ hoary tips and a wash of pinkish. Whiskers colorless, some of the black at base. The young (3 Specimens, 1163, 1164, 1165) differ slightly in being somewhat paler and having a slightly stronger external wash of pinkish.

The above discriptions of colors are valuable as being based on a comparison of fresh specimens of young and adult individuals of each species taken at same place & day.

1166 Arvicola austerus ♂ juv. Not measured. Caught same spot as Nos. 1162 & 1165.
1167 " " ♀ juv. do do

Nov. 29, 1890. Ft. Snelling, Minn.

1168 Arvicola austerus ♀ im. nearly full grown. Not measured.
1169 " " ♀ juv. do
1170 " " ♀ juv. do
1171 Blarina brevicauda ♂ ad. Measurements on Table.
1172 " " ♂ im. Not measured.
1173 Hesperomys l. ♀ ad. Measurements on Table.
1174 " " ♂ ad. do

1175 Sorex cooperi ♀ Measurements on Table.
1176 " cooperi ♂ meas. on table
1177 " ♂
1178 Hesperomys michiganensis Brim.
Colecothraus carolinus. — One seen on the ice beside the Minnesota River.
Spizella monticola. — Very scarce.

Nov. 30, 1890. Ft. Snelling, Minn.

Corvus americanus. — Two beside Mississippi River.
Bubo virginianus. — One heard in the evening, on Pikes Island.
Spurius tristis. — In large flocks.
Calcarius lapponicus. — In very large flocks. Utters a sweet mellow note followed by a chatter. Thus far but the one Snow Bunting noted has been seen.
Spizella monticola. — Two or three in a warm marsh (Minn. R.)
1179 Hesperomys l. ♂ ad. Measurements on Table.
1180 " " ♂ ad do
1181 " " ♀ ad. do
1182 " " ♀ ad. do
1183 " " ♂ im. Not measured.
1184 " " ♂ juv. do
1185 Hesperomys michiganensis. ♂ im. do
1186 " " ♂ im. do
1187 " " ♀ im do
1188 " " ♀ ad. Measurements on Table.
1189 Blarina brevicauda ♂ ad. do
1190 " " ♀ ad. do
1191 Sorex cooperi ♀ do
1192 Mus musculus ♀ im Not measured.
1193 Arvicola austerus ♂ im do
1194 Arvicola ♂ ad. Measurements on Table. (Caught in the marsh.)

To-day there was a light flurry of snow (the first since the 8th [I think that was the date. It was Saturday]) and colder weather so I took in my traps, having caught 41 small mammals & a Blue Jay during the last three days.

Dec. 1, 1890. Ft Snelling, Minn.

Sitta canadensis. – One only seen.
Spinus tristis. – A large flock feeding on hemp.
Carpodacus purpureus. – Several.

Dec. 7, 1890. Ft. Snelling, Minnesota.

1195 Putorius erminea ♂ ad. Measurements on table; all white, except the blk. tip, & a sulphury suffusion on tail; some of the whiskers are also blackish. Shoton Minnehaha Creek.
Spinus tristis. – A large flock feeding on hemp.

Dec. 9, 1890. Ft. Snelling, Minnesota.

Spizella monticola. – Once two in a dense growth of rushes in a sheltered place.
Certhia familiaris. – One or two seen. When flying from tree to tree it utters a thin chatter, followed, after alighting by its usual wheezy note.
Sitta carolinensis. – One couple seen.
Bubo virginianus. – A pair together in the timbered bottom of the Minnesota River.
~~Corvus americanus.~~ – Hook on Pike's Island.
No other birds were seen in a long walk.

Dec. 10, 1890. Ft. Snelling, Minn.

Corvus americanus. – A flock of crows stayed on Pike's Island until yesterday. To-day none were seen there.
Harporhynchus rufus. – One seen to-day on Pike's Island. It was in a sheltered spot where there was a great deal of cover – grapevines, brush fences and bushes.
No Shrikes (Lanius) have been seen since the fall migration of L. borealis.
Spizella monticola was absent from its most sheltered retreats. It was last seen in a marsh, on Dec. 9.
1196 Sciurus hudsonius ♀ Measurements on Table.

1197 Lepus sylvaticus

7254 Parus atricapillus ad. Sex not determined. Measurements on Table.

Dec. 13, 1890. Ft. Snelling, Minn.

7255 Archibuteo lagopus sanctijohannis ♀ Measurements on Table.

8 ~~Cyanocitta cristata~~
9 ~~Spinus tristis~~
10 " "
11 " "
12 " "
13 " "
} Not skinned.

7256 Cyanocitta cristata. ♂ ad. Not measured; caught in "Erie" trap.

1198 Lanius striatus gracilis ♂ juv. Oct. 20, 1890. Not measured.

Dec. 28, 1890. Ft. Snelling, Minn.

Spinus tristis. – A few seen every morning.
Calcarius lapponicus was seen in numbers on their prairie resort west of the reservation on Dec. 24.

1199 Lepus sylvaticus ad. Skull only. Camp Douglas, Juneau Co., Wis., July, 1890. Picked up in the woods.
1200 Lepus cuniculus ad. Tame white Rabbit. Ft. Snelling. Oct. 10, 1890

"I send you some notes on the collection as far as we have gone. Most of these, as you will see, are in reply to your inquiries: Anas obscura. – Nos. 5225, 5226, 5227, and 6575, are obscura, all the others cyanoptera.
Branta c. minima. – 4403, 5678.
" " occidentalis. – 5954, 5904, 5923, ——?, 5827.
Ardea t. rufescens. – 3349.
Erecunetes occidentalis. – 5236, 5235 (sent as T. bairdii).
Accipiter atricapillus. – 5069, 5089 (not striatulus).
Archibuteo ferrugineus. – 5076 (not sancti-johannis).
Falco columbarius. – 3365, 5708, 2085.
Falco richardsonii. – 5819.
Empidonax wrightii. – 6270, 6364, 6269.
Empidonax griseus. – 2726, 3195, 4791, 5285, 6280.
I think these cover the ground."
[These corrections are made in catalogue.]
See also page 174

Birds collected at Camp Douglas, Juneau County, Wisconsin, from July 5th to Sept. , 1890
(See note on page 135)

7124	Piranga erythromelas. ♂ad.	July 9, 1890.	Measurements on Table.
7125	Sylvania canadensis. ♂ad.	do	do
7126	Helminthophila ruficapilla. ♂ad.	do	do
7127	Mniotilta varia. ♀ad.	do	do
7128	Merula migratoria. ♀ad.	do	do
7129	Myiarchus crinitus ♂ad.	do	do
7130	Pipilo erythrophthalmus ♀ad.	do	do
7131	Zenaidura macroura. ♀ad.	do	do
7132	Mniotilta varia. ♀ad.	do	do
7133	Contopus virens. ad.	do	do
7134	Progne subis. ♂juv. (2nd year?)	July 11, 1890.	do
7135	Spizella socialis. ♀ad.	do	do
7136	Turdus aonalaschkae pallasi. ♂ad.	do	do
7137	Pipilo erythrophthalmus. ♂ad.	July 12, 1890.	do
7138	~~Cyanospiza~~ Passerina cyanea. ♂ad.	do	do
7139	Spizella pusilla. ♂ad.	do	do
7140	Spizella socialis. ♀ad.	do	do
7141	Coccyzus erythrophthalmus. ♂ad.	do	do
7142	Seiurus aurocapillus. ♂ad.	do	do
7143	Geothlypis trichas. ♂ad.	do	do
7144	Melospiza fasciata. ♂ad.	do	do
7145	Dendroica ~~pinus~~ vigorsii. ♂juv. (just from nest).	July 14, 1890.	Not measured.
7146	Turdus aonalaschkae pallasi. ♂ad.	do.	Measurements on Table.
7147	Spinus tristis. ♂ad.	do	do
7148	Trochilus colubris. ♂ad.	July. 15, 1890.	do
7149	Sturnella magna. ♂ad.	do	do
7150	Euscalus ~~guiscula~~ aeneus. ♂ad.	do	do
7151	Melanerpes erythrocephalus. ♀ad.	do	do
7152	Poocaetes gramineus. ♂ad.	do	do
7153	Lanius ludovicianus excubitorides. ♀juv.	June 15, 1890.	Not measured.
7154	" " " ♀juv.	do	do
7155	Piranga erythromelas. ♂ad.	July 16, 1890.	do
7156	" " ♂ad.	do	do
7157	Corvus americanus. ♂juv.	do	do
7158	Molothrus ater. ♂juv.	do	do
7159	Poocaetes gramineus. ♂ad.	July 17, 1890	do

7160	Spinus tristis. ♀ad.	July 17, 1890.	Measurements on Table.
7161	" " ♂ad.	do	Not measured.
7162	Pipilo erythrophthalmus. ♂ad.	do	do
7163	" " ♂ad.	do	do
7164	Peterus galbula. ♂im. (2nd year?)	do	do
7165	Chordeiles virginianus. ♂ad.	July 18, 1890.	Measurements on Table.
7166	Geothlypis trichas. ♀ad.	July 25, 1890.	Not measured.
7167	Cistothorus stellaris. ♂ad.	do	do
7168	Melospiza fasciata. ♂juv. (1st pl.)	July 26, 1890.	do
7169	Circus hudsonius. ~~♂juv.~~ (♀juv.)	do	do
7170	Helminthophila ruficapilla. ♂ad.	do	do
7171	Progne subis. ♂juv (1st pl.).	do	do
7172	" " ♂juv. "	do	do
7173	" " ♂ad.	do	Measurements on Table.
7174	Dendroica vigorsii. ♂ad.	do	do
[7175	Ardea virescens. ♂juv. (1st. pl.)	Aug. 1, 1890.	Ht. Snelling. Not measured]
7176	Vireo flavifrons. ♀ad.	August 16, 1890.	Not measured.
7177	Habia ludoviciana. ♂juv.	do	do
7178	Sturnella magna. ♀juv.	Aug. 17, 1890	do
7179	Piranga erythromelas. ♂juv.	do	do
7180	Cyanocitta cristata. ♂ad.?).	Aug. 19, 1890.	do
7181	Otocoris alpestris praticola. ♂ad.	do	do
7182	" " " ♀ad.	do	do
7183	Coccyzus erythrophthalmus. ♀ad.	Aug. 20, 1890.	do
7184	Melanerpes erythrocephalus. ♀juv.	Aug. 24, 1890.	do
7185	Bonasa umbellus ♀ad.	do	do
7186	~~Melanerpes erythrocephalus~~ Piranga ~~erythromelas~~. ♂ad.	do	do
7187	Piranga erythromelas. ♂juv. (Young of the year)	do	do
7188	Petrochelidon lunifrons. ♂juv.	do	do
7189	Dolichonyx oryzivorus. ♀juv.	do	do
7190	Passer domesticus. ♀ad.	do	do
7191	Coccyzus erythrophthalmus. juv.	Sept. 1, 1890.	do
7192	Melospiza georgiana juv.	do	do
7193	Actitis macularia. ♀juv.	Sept. 7, 1890.	do

Fort Snelling, Minnesota.
January 1891.

At his request, I sent Mr. Cosmos Mindeleff, Bureau of Ethnology, Washington, D. C. the following:-
56 cards, for a card catalogue of ruins of the U. S., in preparation by the Ethnological Bureau, being an account of all the ruins known to me, personally, in the region covered by the Verde and Prescott Sheets of Powell's maps, covering the region from the 111th to the 113th degrees of longitude and from the 34 to the 35 parallel of latitude.
Two Map Sheets (the Verde and Prescott Sheets), on which are indicated all the ruins known to me personally, distinguished by the following signs (1) □ ruins of a village, (2) L ruins of cliff dwellings, (3) ⊸ ruins of cavate lodges, (4) ⊥ ruins of towers, (5) o variety not determined. These ruins are also numbered on the map consecutively in red ink, the cards having corresponding numbers in red ink.
106 Photographs of Cliff-Dwellings and objects found in them, as follows:-
Ancient Burial Ground (shown on map) No. 64.
Of objects from the Verde Valley generally, Nos. 80, 81, 291, 297, 197, 198, 76, 77, and 296.
Of Ruin No. 7, Nos. 86, 95.
" " " 10 " . 100, 101, 102, 302,
" " " 11 " . 66, 67, 68.
" " " 15 " . 93, 94, 105, 108, 298, 299, 300, 301.
" " " 16 " . 97, 107, 79 (lower l. hand fig.).
" " " 19 " . 89, 62,
" " " 20 " . 306, 307, 308, 309, 57, 58, 59.
" " " 24 " . 96, 281, ~~#~~,
" " " 25 " . 99, 106, 38, 9, 11, 8, 10, 17, 333, 331, 330, 334, 13, 332, 15, 14, 16.
Of Ruin No. 27. Nos. 21, 19, 20.
" " " 28 " . 18.
" " " 29 " . 265.
" " " 30 " . 4, 6, 7, 1, 268, 310, 2, 3, 5, 284, 267, 266,
" " " 31 " . 264, 304, 305, 303, 24,

Of Ruin No. 34. Nos. - 292, 253, 92, 43, 42, 258, 98, 293, 78, 74, 50, 75, 45, 47, 44, 48, 49, 51, 46.
Of Ruins No. 36. Nos. - 28, 31,
" " " 38 " . - 36, 35, 33.
" " " 48 " . - 40.

January 4, 1891. Ft. Snelling, Minn.
Spinus tristis. - A flock of about 200 feeding on hemp near the yard of my quarters. There were no Pine Linnets nor Red Polls with them.

January 10, 1891. Ft. Snelling, Minn.
Spizella monticola. - When standing on the right (east) bank of the Minnesota River, in a skirt of woodland, I heard the notes of many Tree Sparrow. The search, the rushes of an adjoining marsh or slough were found to be occupied by an immense flock of them. None have been seen since Dec. 9, when a few were noted in this same place. There are no Juncos about.
Sitta carolinensis. - A pair seen.

January 13, 1891. Ft. Snelling, Minn.
Coccothraustes vespertina. - Heard.
Cyanocitta cristata. - Several seen daily.

Vesperugo d. fuscus. - Description of No. 2447, Am. Mus. Coll., ♀ ad., Aug. 10, 1886, Ft. Verde, Arizona. Collected by E. A. M. (No 4444 Mearns Coll.). Interfemoral membrane not furred at base. Membranes plain and rather dark colored. Ears blackish. Above clay-brown, below much paler. Tragus rather pointed. This is Eptesicus fuscus. Elem.

Jan. 17, 1891. Ft. Snelling, Minn.
Coccothraustes vespertinus. - One or two seen.
Carpodacus purpureus. - Two seen.

Jan. 24, 1891.
Irvin Cooke saw 3 Crows (Corvus americanus) on a tree near his school of McAllister (in St. Paul, Minn.

Elevations.

(From Powell's U.S. Geol. Surv. Maps.)

1. Oak Creek at Thompson's is abroutt 4000 ft.
2. " " 2 m. above the E. fork in Indian Garden 5000
3. Cherry Creek (pine timber) about 5000
4. Cedar - covered mesa at top of Grief Hill 5000
5. E. Fork of Verde Riv. (on Payson road), where the Bower rams are 4000
6. The pine clad summits of the Verde Mts, N. of Bloody Basin, and east of Sycamore, Indian and Squaw Creeks are 6000
7. The 'Saw Log', Fossil Cr. Trail, and Mud Tanks about 6000
8. The Tonto Basin Rim Rock at Baker's Butte, and all the region around Fern Springs is marked 7000
9. Baker's Butte - - 8182
10. From the Tunnel, (head of E. Fork Verde R.) on the Crook Road, the rim rock is 8000 keeping this elevation for about 15 m. (S.E. to the 111 th meridian).
11. The general level of Tonto Basin is 6000; but along the streams (East Verde, Tonto Cr., etc.) it is lower. Tonto Cr., heading at the rim rock, about 7000, is 5000 at the junction of the East Fork, 4000 at the junction of Spring Creek, 3000 at the junction of Wild Rye Creek. The east Verde, heading in the Mogollon Mesa at 7500, is 6000 at the foot of the rim rock, 4000 at crossing of Payson road, 3500 at mouth Pine Creek, 2800 at Verde R. There are buttes in Tonto Basin over 7000 ft. high.
12. The general region from Mormon Lake south (about 35 miles in air line) to Bakers Butte is 7000 ft. Mormon Mt. is given an elevation line 8000 at a point below the summit, from which I infer that it is as high or higher than Baker's Butte. The Peaks at Quaking Asp an elevation line near their summit placed at 8000, so those peaks must be about as high as Baker's Butte. Stoneman's Lake is below the 7000 ft. tracing, but not much.
13. Rattlesnakes Tanks lies between the 5000 + 6000 tracings, the rim rock at Pine Tanks being 6000 ft., thence past Woods's to Munds's ranch the road runs midway between the 6000 + 7000 tracings, though the altitude is doubtless nearer 6000 all the way.

14. The summit west of Bloody Basin is 5000
15. Mazatzal Peak is 8065
"North Peak" and intermediate peaks of Mazatzal Range 7000 to 8000
16. The Black Hills, northwest of Ft. Verde are 7000
17. From the Pieinga to Whipple about 5000, a little lower on Agua Fria
18. The highest mountains about Whipple (to the south) 7000
19. Big Bug Creek 4000
20. Bumble Bee 3000
21. Foot of Black Cañon 2000

Answers to questions concerning specimens in my collection, by F. M. Chapman.

"No. 4977 is Ardea rufescens."

"No. 3287 is Agraletis semipalmatus."

The Goshawks are undoubtedly A. atricapillus (verus).

5. Cf. Brewster, Auk VI, p. 89. Empidonax wrightii.

The goose is Chen rossii as you determined it.

(See, antea, p. 167).

Jan. 20, 1891. Fort Snelling Minnesota.

Took a long walk. The day very warm and pleasant. I hoped to find Chipmunks or Red Squirrels out of their burrows, but saw none.

Spinus tristis. — Very large flocks.

Spizella monticola. — One flock of about a hundred (100) in a sheltered valley near the Minnesota River. Among them I saw what looked like Junco h. shufeldti, but I frightened it and it flew off where I could not find it.

Certhia familiaris. — One scattered flock.

Sitta carolinensis. — One.

Picus pubescens. — One male.

Bonasa umbellus. — Two seen together.

Cyanocitta cristata. — One flock.

No other birds were seen; and the only mammal was Lepus sylvaticus, two of which were flushed from ~~the~~ amongst the ~~reeds~~ reeds on frozen marshes.

7257 Picus pubescens ♂ ad. Not measured.
7258 Certhia familiaris ad. do
7259 " " ad. do

Febr. 3, 1891. Ft. Snelling, Minn.

Carpodacus purpureus. — During the past few days these birds have been feeding in hundreds in the protected valley of the Minnesota River, the weather being cold (20 to 25° below zero, Fahr.). They have been common in small parties all winter. Now they are feeding on seeds of the great ragweed, burdock, and hemp. Before they fed largely on box elder & iron wood seeds.

Febr. 5, 1891. Ft. Snelling, Minn.

√7260	Carpodacus purpureus.	♂ ad.	Measurements on Table.
√7261	" "	~~♀ ad.~~ ♂ juv.	do
√7262	" "	♀ ad.	do
√7263	" "	♀ ad.	do
√7264	" "	♀ ad.	do
√7265	" "	♀ ad.	do
√7266	Parus atricapillus	ad.	Not measured.
√7267	" "	ad.	do
√7268	Picus pubescens.	♂ ad.	do
√7269	Spinus tristis.	♂ ad.	do
√7270	" "	[illegible]	do
√7271	" "	♀ ad.	do
√7272	" "	[illegible]	do

Febr. 6, 1891. Ft. Snelling, Minn.

√7273	Certhia familiaris	ad.	Not measured.
√7274	Sitta carolinensis	♂ ad.	do
√7275	" "	♀ ad.	do
√7276	Carpodacus purpureus	♂ ad.	Measurements on Table.

Febr. 13, 1891. Ft. Snelling, Minn.

Corvus americanus. — Several seen on [illegible]

Note. — In looking over a small series of Sturnus vulgaris (Sturnus vulgaris vulgaris) with small-billed Starlings from the Mississippi Valley at the mouth of the Minnesota River, all of which are probably referable to the subspecies notabilis, my attention was attracted to a patch of pale ochraceous hair feathers in the crown, strongly suggestive of the coloring of Sturnus unicapillus. This led to a careful examination which showed that such a trace of ochraceous could usually be found on parting the feathers, and is not rarely apparent on the surface. This fact is of interest as tracing the descent of this race from an ancestor having a ochraceous crown, just as in Clarke's Nutcracker we have the white of the [illegible]

Dendroica aestiva sonorana. — Extract from a letter from J. A. Allen, dated Cam. Mass. N.H., March 6, 1891: — [Critical remarks on Troglodytes on page 112.]

"As to the Yellow Warblers, none of them are typical sonorana; not any are quite so near it as are some of Scott's specimens. No. 3063, ♀, comes very close to being typical sonorana, and No. 6227, ♀, is near enough to be referable to it. One or two other females shade a little towards it. Nos. 2927, 4728, and 5342, ♂s, are absolutely referable to sonorana, but not quite typical, while Nos. 5304, 6201 & 6202, ♂s, are rather nearer this than aestiva. As to what morcomi is I do not know. Supposing it to be the western bird at large, it strikes me as too near aestiva to warrant separation. But we are too different in good eastern material for me to decide."

March 7, 1891. Ft. Snelling, Minn.

Lanius borealis. — First seen; one.

Note. — It was next seen March 12 (one).

March 5, 1891 Ft. Snelling, Minn.

7279 Megascops asio Gad. Gray phase but verging slightly towards the red. Taken from the hollow limb of a tree on Pike's Island by a woodchopper.

250; 610; 178; 87; cul. + cere, 20; cul. 15.5; nost., 12; gape, 27; tip of bill to anter of pupil, 31; to occiput, 50; base of bill to occiput, 42; diameter of eye, 14.5; ear tuft, 40. tibia, 56; Tarsus, 33; mte, 29; cl., 10.5; inner claw, 12; outer claw, 10.5; hallux with its claw, 23; claw, 10 m m. Irides yellow. Stomach (gizzard) contained hair of Arvicola and several small whitish (quartz?) pebbles.

March 15, 1891. Ft. Snelling, Minn.

1201 Arvicola riparius ♂ juv. Not measured. Mr. Williams skelet. skilled it on the crust of a snowbank. It had got lost from the opening out of which it came. No. skull.

When lo! a rainbow duplicate and fair,
Spanning the chasm below, hung o'er the scene,
One end upon the grave, the other on a far-off hill.
No priestly rights — no sable stole — was there
No mummery o'er the dead — the dead grew ~~past~~ deaf
To human praise or blame — past human praise
or blame, but the rough hands and kindly hearts
And rough but honest hands had scoopt a grave
Laid him down to everlasting sleep.
Then o'er his mangled frame piled high the rocks
For the gaunt wolf and hungry bear will come at night
The rough wind chant his funeral dirge.
The yew-tree nods above, and the soft cadences
Of sighing pines sing mournful melodies ~~at night~~
The bee comes here to drink and flies away
Unconscious of the dead — the butterfly
Spreads his light wing upon the sand below
And floats away upon the mountain winds.

His faithful dog remains — brute nature can receive
No longer he feasts upon his flesh
Hearing a human voice, he gives a long and piteous howl
A wail of hunger and distress

High marched an eagle soared aloft
On clanging wing fit emblem of the
Soul ~~of great~~ now set free.

Monuments
Whether or no he has one
Don't matter now to him.

"Genus Ki."

Note. — These maudlin lines were written o'er the grave of Wilson, killed by Grizzly Bear, on Oak Creek. See photographs.

March 22, 1891. Ft. Snelling, Minn.

~~Phoenix~~ Pinicola enucleator. — Saw our cat eating one that he had caught in neighboring garden, though frost not out of ground, and still mostly covered with deep snow.

7277 Anthus pensilvanicus : Ft. Verde, Ariz. (Natural.) on books.
7278 " " do do

Febr. 18, 1891. Ft. Snelling, Minnesota

Otocoris alpestris praticola. – A few arrived to-day. They are the first I have seen this year. I have kept a lookout for var. lencolaema during the winter, but there have been no Shore Larks of any kind.

7279 is Scops asio (see p. 176). Next no is 7280.

7280 Lanius borealis. Fad. Measurements on Table. Ft. Snelling, Minn. March 15, 1891.
7281 Crecothraustes vespertinus. Fad. Not measured.
7282 " " Fad. do
7283 " " Fad. do

Corvus americanus. – One see to-day (March 15, 1881).

Lanius borealis. – The shrike's peculiar notes attracted my attention. It had recently eaten an entire Field Mouse (Arvicola austerus).

March 19, 1891 Ft. Snelling, Minn.

The first flock of ducks seen flying north.

Spinus tristis } some of each noted.
Spizella montana }

Carpodacus purpureus The purple Finches were singing.

Otocoris alpestris praticola – Shore Larks are now common.

March 21, 1891. Fort Snelling, Minn.

1203 Putorius longicaudus, adult Fad. Measurements on Table.

Merula migratoria. – When I opened the front door to go to sick call, robins were singing in the old cemetery. It was their full song, and they were the first seen this year.

Coccothraustes vespertinus. – Several seen.

March 23, 1891. Fort Snelling, Minn.

Ampelis garrulus. – Walking up the Miss. Riv. on the Railroad, I saw one sitting near me, on an elm-tree. I shot it, but, being hit in the head it towered up in the air, circled around once or twice and then fell on the rotten ice of the River where I could not go after it. This is the first time I have seen the Bohemian Waxwing.

March 23 — Continued.

Glaucionetta clangula americana. – A flock of nine males on the Mississippi River. The first ducks identified this spring.

Sciurus hudsonius. – One seen under the bluff bank of the Miss. Riv., below Minnehaha Creek. Their tracks were numerous in the snow.

Arctomys monax. – One shot today by Private Ruff. The first seen this year. Snow still quite deep in places, only bare ground in sunny exposures.

Corvus americanus not noted since Febr. 15 until March 15, and not again up to date. The dates for this year are Jan. 24, Febr. 15, Mar. 15.

1 7284 Otocoris alpestris praticola. Fad. } mated; not measured
1 7285 " " " Fad }
1 7286 Spizella monticola Fad. not measured.

March 25, 1891. Ft. Snelling, Minn.

Crecothraustes vespertinus. – A flock.

Spinus tristis. – Large flock feeding on seed of paper birch.

1203 Procyon lotor. Fad. Measurements on Table. A flagman came and told me that some workmen on the bluff below the Battery stable had discovered a Wild Cat in the cliff. I went with him, and found a Raccoon on a shelf in the face of the cliff. I shot it, and the flagman, who had been a whaler in the Arctic, went down the cliff on a rope. He found that the Coon's tail was imbedded in ice, so that he could not get away. He came up, got a pick, went down, chopped him out, & brought him up to me.

Note. – Musician Ruff, 3d Infty. shot a wolf on January 11, 1891, on the bank of Minnesota River, where it was started out of some long grass. The County of $4 and $4. that he got for the skin made it quite a prize. A man killed a Coyote on Pike's Island last winter, making authentic Records for both of the Wolves since I came here.

Note. – Private Ruff – owns a ferret. Last winter he killed ~~#~~ 480 rabbits (G. sylvaticus). On the day he killed the Gray Timber Wolf, he got, with the aid of his companions, between 40 + 60.
Note. – Mr. Calahan saw a Gray Wolf back of the stables, 4 years ago.
A Red Fox was killed on the target range last winter.

March 26, 1891. Ft. Snelling, Minn.

Corvus americanus. – Present again.

March 29, 1891 Ft. Snelling, Minn

7287 Certhia familiaris ♀ad. not measured.
1204 Lepus sylvaticus. ♂ad. Measurements on Table. Skin & skull.
1205 Sciurus hudsonius. ♀ad. do Skin only.
1206 Tamias striatus griseus ♂ad. Some measurements on Table. Skin only.
1207 " " ♀ad. do Skin only.

March 31, 1891. Ft. Snelling, Minn.

Porcothraustes vespertinus. – Flock of 30 flying about utering loud cries.
Calcarius lapponicus. – Migrating north in numbers, singing loudly & sweetly.
Otocoris alpestris hoyti. – Soaring high in air & singing; mounts by successive upward curves and in spiral until out of sight, when it drops to the earth singing. Commonly sings on housetops.
Sturnella neglecta. – One singing.

April 1, 1891. Ft. Snelling, Minn.

The snow is nearly gone, only drifts in shady places left; but the weather mostly cloudy.
Sialia sialis. – One male; singing; the first seen.
Merula migratoria. – About hospital; these are the second seen.
Corvus americanus. – Getting common.
Carpodacus purpureus. – A few.

April 2, 1891. Ft. Snelling, Minn.

Corvus americanus. – Common. Flock of 16 flew over fort in early morning.
Merula migratoria. – Several seen. Singing.

April 4, 1891. Ft. Snelling, Minn.

Strix americana. – Not seen ~~[illegible]~~. The Gelach boys have seen one for three days past on Pike's Island, below their house. To-day Herman Guersen tried to shoot it, but it flew to the island, and the water was so high that he did not venture to follow it in a boat.
Arctomys monax. – Saw one on top haystack, which he had riddled.
Notes. – Scolecophagus carolinus. – A flock of 28 seen on lower end of Pike's Island, on March 29. Next seen April 6.
Merganser americanus. – First identified March 29th; abundant.

April 5, 1891 Ft. Snelling, Minn.

1208 Tamias striatus griseus. ♂ad. ~~[illegible]~~ Measurements on Table.
1209 Lepus sylvaticus ♂ad. Measurements on Table.
1210 " " ♂ad. do
7288 Cyanocitta cristata ♀ad. do
Sialia sialis. – One or two heard – the first seen first seen on April 1st.
Circus hudsonius. – First seen. two rather
Merula migratoria. – Now common; singing.
Corvus americanus. – Common; migrating.
Procyon lotor. – A German hunter, whom I met, had killed a Raccoon in a tree near Minnesota River.
7289 Buteo borealis ♀ ad. Stomach entirely empty. Measurements on Tabe.

April 6, 1891. Ft. Snelling, Minn.

Podilymbus podiceps. – One in Mississippi River.
To-day is the first really springlike one that we have had. Robins & Bluebirds singing in plenty.
1211 Arctomys monax ♂ad. Measurements on Table.
1212 Geomys bursarius ♂ad. do
The pocket gophers begin to throw out their burrows into mounds in the spring as soon as the ground softens, always in sunny situations first. The first mounds were seen on April 5th, but some of them looked as if they had been made several days before.
Hermodinus tridecimvittatus. – In walking around the house, I noticed that their burrows had been

April 10 — Continued.

freshly opened up; and a small quantity of fresh dirt thrown out in front.

Sialia sialis
Merula migratoria
Spizella pusilla
Melospiza cinerea } Common; singing.

Archibuteo lagopus sancti-johannis. — One pair.

April 7, 1891. Ft. Snelling, Minn.

Agelaius phoeniceus. — First seen; one.
Acalaites vociferus. — First seen; in wet place on the parade-ground.
Spizella monticola. — Quite a number seen; but the real migration has not yet commenced, though a few are seen every day.

There is still considerable snow in drifted, shady spots. To-day the ice went out of the Minnesota River.

April 8, 1891. Ft. Snelling, Minn.

The first steamboat passed up the Minnesota River this season.
Pussies out on Willows and quaking Aspens.
Frogs piping. The marshes & sloughs still frozen over.

April 11, 1891. Ft. Snelling, Minn.

Tympanuchus americanus. — Heard on Target Hill.
Sturnella neglecta. — One was heard March 31. None since till this morning, when they were common on a prairie west of post. They are paired.
Calcarius lapponicus. — The large flocks are no longer present, but small flocks and pairs are common, singing very sweetly.
Spizella monticola. — Now common.
Junco hyemalis. — First seen — (except one winter record of a single Junco, thought at the time to be J. oreganus shufeldti); abundant; singing; both sexes.
Sayornis ~~say~~ phoebe. — First seen; one pair.
Melospiza fasciata. — First seen; abundant; singing.
Ceryle alcyon. — First seen; one on Minnesota
Agelaius phoeniceus. — Flocks; many hundreds seen on a

(April 11 — Concluded.)

willow swamp; at edge of Minnehaha Falls, Ft. Snelling were about a thousand. Their noise resembled as much as anything a locomotive blowing off steam.
Quiscalus q. aeneus. — First seen; a number; some were paired in nests, using pieces of Red Winged and some were separate.
Anas boschas. — Musician Ruff killed a drake yesterday. John Haag also shot a ♂
Branta canadensis. Flock flew over; the first identified.
Passerella iliaca. — First seen; common; singing.
Circus hudsonius. — One in blue plumage.
Buteo borealis. — One.

There is still a narrow line of ice (residuum of snowbank) in front of my house. It began to snow the evening before last. Yesterday it stormed, rain, sleet & snow, all day. This morning the snow was two (2) inches deep & would bear one's weight on the crust; but it was all gone by three o'clock. These birds came on the heels of this blizzard!
Lepus sylvaticus, Arctomys monax & Geomys bursarius came out this afternoon.
§ 121.3 Arctomys monax. Fur in assortment on table.
Zonotrichia coronata. First seen; several.
Poecetes gramineus. — First seen; one; singing.

April 12, 1891. Ft. Snelling, Minn.

Agelaius vicinus. — The second seen; one.
Turdus fuscescens. — First seen; one, sitting on the lightning conductor on top of a barn, uttering its peculiar twittering call.
Otocoris alpestris praticola. — I watched one in his extatic flight and song. He must have remained in the air fully four minutes, I watched him from ascent to descent, and my neck was much fatigued. This pair had a nest but I could not find it. I saw one chase a blackbird that had excited his ire on his upward flight. He worried it as a Kingbird does a Hawk.
Sturnella neglecta. — Now abundant

April 13, 1891. Ft. Snelling, Minn.

Progne subis. – First seen.
Riparia riparia. – First seen.
Larus [illegible]. – First seen. Fairly in [illegible].
Agelaius phoeniceus
Sturnella neglecta
Tanaio hudsonicus
Euspiza americana
} Now common.

Calcarius lapponicus. – In large flocks. I found several that were feeding in a swampy hollow in the prairie. Approaching them as closely as possible, all flew away with a twitter as they started except one male. He allowed me to get quite near, skulking through the hay stubble, sometimes squatting, but only for a moment at a time. As soon as he saw anything to eat within reach he would get up on his legs and go and get it. He kept his eye on me, always trying to sneak off when I got quite close. On or twice when I approached more boldly he mounted a tussock, stretched out his neck two or three times as if to fly, but at last decided to run away as before. I was within a couple of yards when he finally flew up with a loud chirp as if in anger instead of the usual twitter. He alighted a short distance beyond in the corner of a wet hollow. Most of them have formed into a single flock of several hundred, and they may be heard at a great distance as they fly about in the air.

Passer domesticus. – One or two alighted on our house.
Colaptes auratus. – First seen. About a dozen seen later. Quiet.
Sayornis phoebe. – Now common.
Tachycineta bicolor. – Three seen; first seen.
Chordeiles minor. – First seen; two. By pur. Angie yesterday. They were also seen same place.
Melospiza lincolni
Passerella iliaca
Poocaetes gramineus
Spizella monticola
Junco hyemalis
Pooecetes gramineus
} All abundant ~~common~~; singing.
Pustulus [illegible] gallasi. – First seen; one.

April 13, 1891 – Concluded.

Fulica americana. – First seen. Still large flock in [illegible].
Regulus satrapa. – First seen; abundant.
Troglodytes hyemalis. – First seen; one.
Sturnella magna. – First seen. Several.
Pandion haliaetus carolinensis. – First seen; one.
Zenaidura macroura. – First seen; one.
Geomys bursarius. – They have raised from three to eleven mounds, average about six.

7290	Spizella monticola	♂ ad.	not measured
7291	Regulus satrapa	~~April 14~~ ♂ ad.	do
7292	Tachycineta bicolor	♂ ad.	do
7293	" "	♂ ad.	do
7294	" "	♀ ad.	do
7295	Poocaetes gramineus	♂ ad.	do
7296	Euspiza americana	♂ ad.	Measurements on Table.
1214	Tamias striatus griseus	♀ ad.	Contained 5 foetuses about the size of peas. Not measured.

April 14, 1891. Ft. Snelling, Minn.

7297 Phalacrocorax dilophus ♀ ad. Measurements on Table. Mouth "pale blue", becoming campanula-blue in the deeper part of the throat. Membrane of mandible, extending around commissure to below eye and a narrow band bordering the feathers from the base of maxilla to the eye, deep chrome. Iris sea-green, surrounded by a circle of turquoise blue papillae. Bill horn-color, varied with black. Feet purplish black slightly flesh-colored on inside of tibia above. Shot on the Minnesota River, where two were killed.

7298	Sturnella magna	♂ ad.	Measurements on Table.
7299	Tamias cortelis	♀ ad.	do
7300	Numenius americanus*	♂ ad.	Measurements on Table.
1215	Arctomys monax	♂ ad.	Measurements on Table.
1216	Spermophilus tridecemlineatus	♂ ad.	~~Skin~~ Skull only
1217	" "	♂ ad.	Skin and Skull.
1218	" "	♂ ad.	Skin Skull ~~only~~

Spermophilus franklini. – First seen this spring.
S. tridecemlineatus. – Now abundant. Three that I shot were all males.
Troglodytes hyemalis. – One seen.

*See colors over page

April 14 — Concluded

Tympanuchus americanus. — Colors of soft Parts. Sack deep chrome, bordered with glaucous purple above, eye deep chrome. Eyelid yellowish gray. Bill brownish horn color. Feet olive-gray, banded with chrome; claws brownish.

Falco sparverius. — First seen; rare.

Tachycineta bicolor. — Now common

Ceryle alcyon. — Common.

Colaptes auratus. — Now common.

Sayornis fuscus. — Now abundant. Two pairs seen in one tree.

Corvus americanus. — Common

Sturnella magna } both abundant.
Sturnella neglecta }

Junco hyemalis. — Hundreds in one flock. Noise tremendous

Calcarius lapponicus. — One female.

Poocaetes gramineus }
Junco hyemalis } apparently in fullest migratory force.
Spizella monticola }

Passerella iliaca. — Very abundant.

Dendroica coronata. — The second seen; common.

✓7301 Charitonetta albeola ♂ad. Not measured.

April 17, 1891. Ft. Snelling, Minn.

✓7302 Sturnella magna. ♂ad. } a mated pair. Typical.
✓7303 " " ♀ad. } Measurements — Table.
✓7304 " (magna?). ♂ad. } The yellow extends slightly to the pair.
✓7305 " " ♂ad. } Measurements on Table.
✓7306 " neglecta ♂ ad. Typical. One leg had been frozen off, and it had recently been wounded, so it was not measured.

✓1219 Spermophilus tridecemlineatus ♂ad. Not measured.

Sturnella. — The ~~legs and~~ feet are colored alike in the two species. In old males of magna they are more grayish, while females are more flesh-color. The bill of neglecta is brownish instead black, it is also much longer + more slender, with a narrower culmen above.

Gallinago delicata. — One seen by Irvin Cooke. The first seen.

Strix americana. — One seen by Fred Gilbach on Pikes Island. I was told that two had been seen on the back part of the post

(April 17 — Concluded.)

reservation for several days past.

Totanus melanoleucus. — First seen.

Colinus virginianus. — One pair seen on reservation.

Tympanuchus [illegible]. — Two seen in cornfield.

Zenaidura macroura. — Fifty heard cooing. Several heard. The first seen since Apr. 13, when one (the first of season) was noted.

Calcarius lapponicus. — Several seen.

Colaptes auratus. — Hundreds seen, mostly on prairies, feeding on ground, often digging open ant-hills.

April 18, 1891. Ft. Snelling, Minnesota

Tachycineta ~~that~~ bicolor. — Hundreds seen, flying until dusk. The migration now about at its height.

Carpodacus purpureus. Sings constantly, especially in evening, in concert with the Robin.

Poocaetes gramineus. — Mating. Singing exquisitely.

Passerella iliaca. Still abundant; sings sweetly.

Lanius ludovicianus (excubitoroides?). — [illegible]

Dendroica coronata. — Abundant.

Melospiza fasciata. — Abundant, mating.

Ceryle alcyon. — Roosts, when migrating, in woods back from the water.

~~Sphyrapicus varius~~ First seen. Its gray reminds one of a sharp-shinned hawk.

April 19, 1891. Ft. Snelling, Minn.

Spizella socialis. — First seen; singing; ~~abundant~~ common.

✓1220 Spermophilus tridecemlineatus ♂ad. } Stuffed; measurements on Table.
✓1221 " " ♂ad. }
✓1222 " " ♂ad. }

✓7307 Fulica americana ♂ad. Measurements on Table.

April 21, 1891. Ft. Snelling, Minn.

Dendroica vigorsii. — First seen; one.

April 22, 1891. Ft. Snelling, Minn.

Melospiza georgiana. — First seen; common.

Otocoris alpestris. — First seen, about 20.

Tachycineta bicolor. — The bulk of migrants seem to have passed.

Gallinago delicata. — The second seen; one (or 2 heard)

May 2, 1891. Ft. Snelling, Minn.

Put in alcohol (glass tank) a ~~Sturgeon~~ Gar-fish and a Wall-eyed Pike

May 15, 1891. Ft. Snelling, Minn.

Put in alcohol (glass tank) a "White", "Blue", or "Channel

1 Cat-fish"
2 Sheephead
3 Two "Rock Bass" or "Croppies"
4 A Sucker (Catostomus
5 Brehm (
6 "Shiner or White-fish"
7 Common Red-spotted Sunfish

A Yellow (round-tailed) Cat-fish was also taken by the men in their seine, weighing about 20 pounds. The largest Whitefish or White Herring taken was as large as a male shad, but the men all said it was the biggest one they had ever seen. It would weigh about 2 1/2 pounds.

May 17, 1891 Ft. Snelling, Minn.

In drawing their seine the men caught a Leather-Turtle Amyda mutica (Le Seur), a common species in the rivers.

Gar-fish
Shovel-nosed Sturgeon
Rock Sturgeon
Rock Bass.
Hickory Shad.
Shiner or Herring
Red Horse Sucker.
Small Sucker
Channel Cat (fork-tailed & spotted
Sheephead.

April 22 – (Concluded.)

Hesperiphonus rufus. – First seen; two pairs; singing.
Ardea herodias. – First seen; one.
Tympanuchus americanus. – Two chicks, said to be "Prairie Chicks" (possibly Ruffed Grouse) were brought to Mrs. Wynne by a soldier.

April 23, 1891. Ft. Snelling, Minn.

Larus ? Three large gulls flew over my head on the post on my way from sick call. One was white with pure white tail & head; one in young plumage dark all over; one intermediate with dusky tail & whitish body. They were together & doubtless of the same species.
Hirundo thyntrogates. – First seen; one.
Ammodramus leconteii. – First seen; two; one shot.
Tympanuchus americanus. – Several seen flying from field to field, often allowing the farmers to plough quite close to it in the weed corn stubble.
Ardea herodias. – Three flew over to-night.
Otocoris alpestris praticola. – Found a nest; 3 eggs in tussock of long loose grass-stems on parade. (The nest was taken on Apr. 24th, when but 3 eggs were in it still.)

7308 Colaptes auratus ♂ad.
7309 " " ♀ad. } Measurements on Table.
7310 Ammodramus leconteii ♂ad. do
7311 Spinus tristis. ♂ad. No black crown yet; mixed winter & summer plumage; singing. Not measured.
7312 Calcarius lapponicus. ♂ad. } alone together; Apparently mated; Killed at once. Not measured.
7313 " " ♀ad. } Not measured.
7314 " " ♂ad. Not measured.
7315 " " ♂ad. " "
7316 Spiza americana ♀ad. Measurements on Table.
Passerella iliaca. – One or two seen; growing scarce.

April 24, 1891. Ft. Snelling, Minn.

7317 Sphyrapicus varius. ♀ad. Measurements on Table.
1223 Lepus sylvaticus ♂ ad. do
Anthus pensilis rubescens. – First seen; flock of 20 (about).
Junco hyemalis } only one or two of each seen; no Passerella
Spizella monticola }

April 25, 1891. Ft. Snelling, Minn.

Gonostrichia albicollis – First seen.
7319 Otocoris alpestris praticola fledgling. Just from nest. This is the first brood seen out of nest.
7320 Gonostrichia albicollis. First seen; both sexes; several seen.
Xanthocephalus } A flock of many hundreds of these birds was feeding in a ploughed field beside Mother Lake. The Cowbirds were the first seen this spring. One ♀ was seen.
Agelaius ♂.
Molothrus ater
Quiscalus q. ae.
Anas obscura. – First seen; paired; in each case a ♂ & ♀ together.
Regulus calendula. – Seen for the second time this spring.
Ducks were abundant on Lake Amelia.
Tachycineta bicolor. – Several seen; nearly all after migrants have passed on.

7319 Otocoris a. praticola ♀ad. } Apr. 24, 1891. Parents of set of 3 eggs
7318 " " " ♂ad.

April 26, 1891. Ft. Snelling, Minn.

7321 Larus philadelphia ♂ad. Measurements on Table. Iris dark hazel. Bill all black. Feet orange-yellow. Two flocks of about 50 each flew over, this being shot as they passed.

April 27, 1891. Ft. Snelling, Minn.

Dendroica palmarum. – First seen; about five.
Molothrus ater. – The second seen; six, 4 ♂ & 2 ♀ together.

April 28, 1891. Ft. Snelling, Minn.

1224 Tamias striatus griseus. ♂ad. Not measured.
Dendroica palmarum } Abundant in lower branches of cottonwoods, with some buds; willows & box elders that now show quite green.
Dendroica coronata }
Pipilo erythrophthalmus. – First seen; one ad. male.
Gallinago delicata. – One.
1225 Mephitis mephitica. ad. Skull. Highland Falls, New York, Winter, 1876.
1226 Mustela furo. ♀ad. Ft. Snelling, Minn., April 28, 1891. Measurements on Table. Irides dark hazel.
1227 Spermophilus franklini – ad. Ft. Snelling, Minn. Apr. 28, 1891. Skull only.

April 29, 1891. Ft. Snelling, Minn.

1228 Spermophilus franklini ♂ad. Measurements on Table.
1229 Geomys bursarius ♂ad. do

April 30, 1891. H. Snelling, Minn.

Tachycineta bicolor. – Again present in immense numbers

7 Dendroica coronata. – Migrating in great numbers.

Dendroica palmarum. – Common.

17322 Stelgidopteryx serripennis ♀ ad. Measurements on Table. First seen; one shot.

Botaurus lentiginosus. – First heard booming. Sometimes he drives stakes without booming, sometimes both together. First noted this season.

Xanthocephalus xanthocephalus. – Now abundant. The first one was seen in an immense flock of Red-wings & grackles, the day I shot the first specimen of the latter.

17323 ~~Dendroica coronata~~ ♂ ad. Not Measured.

1230 Sterna forsteri ♂ ad. Some measurements on Table.

Colaptes auratus. – Digging a nest; the ♂ works hard at it!

Spizella monticola. – One seen. Nearly all have gone.

May 1, 1891. H. Snelling, Minn.

Chordeiles gramnacus. – First seen; one.

Merula migratoria. – One seen sitting on nest.

1231 Icterus bullockii ♂ ad. Measurements on Table. Skull broken.

Ninox virginianus. – Two seen – Nearly all have departed.

May 3, 1891. H. Snelling, Minn.

Myiadestes townsendi. – First seen; one male; singing.

Turdus ustulatus swainsoni. Feeding in the elms, doubtless on worms in the young buds & fls. Singing. They look as if they were in full summer plumage viewed at a little distance.

Colaptes auratus. – Has completed a nest, having stuffed work.

Lanius ludovicianus excubitorides. – Yesterday Irvin Cooke shot three with his carbine. Two had borne the young (or else were barren); but the fourth contained five (!) fœtuses nearly ready for birth. This latter was preserved in alcohol. The others were spoiled for specimens.

Mus. No. 12[illegible]. (Contained 8 very small fœtuses (5 on one side, 3 the other).)

233 Spermophilus franklinii ♂ ad. Measurements on Table.

17324 Buteo platypterus ♂ ad. Measurements on Table.

Cooke contained a very large dragon-fly and the tail of a garter (striped) snake the body being in œsophagus, the head in gizzard. The gizzard contained a whole crayfish, part of a larger garter snake and a large mass of hair with bones of rodents, of which latter the mandibles were preserved.

Vulpes macrotis, Merriam. No. 2497, Am. Mus. ♂ ad. May 12, 1885. Between Maricopa and Gila; collected by Edgar A. Mearns. (No. 193 Mearns Coll.)

In much worn pelage, with a good deal of the outer fur worn off, so that the color of the underfur is blended with that of the longer hairs. The upper surface of body is drab-gray, tinged with vinaceous cinnamon, the longer hairs annulated with brown and pointed with ~~silvery gray~~ white. The ~~♂~~ upper side of the head is and outer surface of ears are orange-ochraceous, the former much mixed with white, with some dusky annulations, especially around the eyes. The inner surface of ears are coated with long, white hairs. The long whiskers are black. Sides silvery gray, the under fur being less drab (i.e. a purer gray) than above, with brown annulations and long white tips to the hairs. There is a dusky band across the lower jaw, near the end which becomes blackish along the under lip, extending for a short distance around the commissural angle; also a dusky area on each side of muzzle, midway between the nasal pad and eyes; end of muzzle, tip of under jaw, throat, ~~sides of face below~~ and upper lips, white. Under parts yellowish white anteriorly, deepening to cinnamon-rufous on the belly, the sides of abdomen being yellow. Fore limbs grayish buff externally, yellowish white internally. Hind limbs at first grayish like the back, becoming ochraceous below the knee-joint, externally, the inner surface being whitish. Tail grayish above, buff below, tipped with ~~black~~ chestnut-black. Claws colorless.

April 30th, 1891. H. Snelling, Minn.

To-night stayed out near Minn. River until dark, looking for Bats. The following is the first evening —

1232 Vespertilio fuscus Beauvais. ♂ ad. Measurement on Bat Table.

Face, ears & membrane particolored black.

H. H. Spelling, Minn. May 4, 1891.

Turdus — First seen; one.
Zonotrichia albicollis. — Now very abundant.
Dendroica palmarum. — Only one seen.
Spinothilus franklini. — A specimen recently shot had its stomach distended with green vegetation, and a few small pebbles (coarse sand), and the remains of a dark-skinned articulate (worm?) in some quantity. The young embryos ~~were~~ showed a slight enlargement along the tube. [No. 1233 ♂ in my coll.]

May 5, 1891. H. H. Spelling, Minn.

7325 Botaurus lentiginosus ♂ ad. Measurements on Table. I also shot a small black Rail, as it ran through the reeds; but it could not be recovered. It ran like a mouse, as we viewed it from the elevation of bank. [I got it next day. It is Rallus virginianus.]
7326 Rallus virginianus ♂ ad. Not measured.
Picus pubescens. — Some have dug down deep enough to conceal themselves. I do not know how near to completion their burrows are, however.
Merula migratoria. — Several are now known to be incubating.
Tachycineta bicolor. — Still in numbers; building.
Sphyrapicus varius. — Common in pairs.
Passer domesticus. — One ♀, Capt. Stouch's quarters, in a small spruce, near piazza.

May 6, 1891. H. H. Spelling, Minn.

Totanus melanoleucus. — First seen; two Pelee Isl.
Poocaetes gramineus. — Took nest & eggs.

May 7, 1891. H. H. Spelling, Minn.

7327 Turdus mustelinus ♂ ad. Not measured.
7328 Dendroica coronata ♀ ad. do
7329 Habia ludoviciana ♂ ad. do
7330 Dolichonyx oryzivorus ♂ ad. do

May 7, 1891. H. H. Spelling, Minn.

1234 Arctomys monax. ♀ ad. Measurements on Table. Had recently borne young. Mammae, $\frac{2-2}{2-2}$ = 8; contained milk.
Habia ludoviciana. — First seen; 2 males.
Dolichonyx oryzivorus. — First seen; one ♂ brought to me by a boy. I saw none on Pelee Island.
Turdus mustelinus. — First seen; two (pair?).
Minotilta varia. — Now common.
Regulus calendula. — Abundant.
Sphyrapicus varius. — Common; noisy.
Totanus solitarius. — First seen; several.
Tringoides macularius. — First seen; several pairs.
Tachycineta bicolor. — building nests in willow stumps.
Helminthophila celata. — One seen. First seen.
Seiurus aurocapillus. — First seen; one male. Pelee Island.
Porzana carolina. — First heard.

May 8, 1891. H. H. Spelling, Minn.

1235 Arctomys monax ♂ im. Measurements on Table.
1236 Vespertilio subulatus ♂ ad.
1237 " " ♀ ad.
1238 " " ♀ ad.
} Measurements on Table. Preserved in alcohol.

Anas boschas. — Found nest at 12 M. Visited again at 8 P.M.. Parent had not returned & eggs cool. Covered eggs with the down that was around the nest, and brought one egg home. The old duck circled in the air over nest, and before taking flight acted a good deal like a Grouse.
Habia ludoviciana. — Now common; singing.
Rallus virginianus } Now abundant.
Porzana carolina }
Colinus virginianus. — Now added coll. [illegible]

May 9, 1891. H. H. Spelling, Minn.

1239 Arctomys monax. ♀ im. Measurements on Table. From same burrow as No. 1235. Skull crushed.
Empidonax minimus. — First seen; common.
Tyrannus tyrannus. First seen; one.
Geothlypis trichas. — First seen; one; singing. (wks)

May 9 — Continued

Chaetura pelagica. — First seen; common.
Dendroica aestiva. — First seen; common; singing.
Helminthophila ruficapilla. — First seen.
Melospiza lincolni. — First seen; common.
Agelaius phoeniceus. — One seen in slough.
Icterus galbula. — Common now; singing.
Spizella pallida. — First seen.
Seiurus noveboracensis. — First seen; one; singing.
Cistothorus palustris. — First seen; one.
Galeoscoptes carolinensis. — First seen; one.
Cyanocitta cristata. Took nest + 4 eggs.
Harporhynchus rufus. Took nest + 4 eggs.
Anas boschas. Took nest + 9 eggs.
√7331 Sturnus vulgaris ♂ ad. mostly winter plumage; not measured.
√7332 " " ♀ ad. mostly summer plumage; " "
√7333 Habia ludoviciana ♂ ad. Measurements on Table.
√7334 Troglodytes aëdon parkmanii ♂ ad. do
√7335 Colinus virginianus, ♂ ad. do

May 10, 1891. H. H. Snelling, Minn.

1240 Geomys bursarius ♂ ad. Measurements on Table.

May 11, 1891. H. H. Snelling, Minn.

√7336 Quiscalus quiscula aeneus ♂ ad. In very dull, worn plumage, but positively a male. Not measured.
√7337 Harporhynchus rufus ♂ ad. Parent of Set No. 570. 4 eggs. Not measured.
√7338 Agelaius phoeniceus ♀ ad. " "
1241 Spermophilus tridecemlineatus. ♀ ad. Measurements on Table. Mammae inguinal. Contained nine fœtuses as large as grapes + two abortive one as large as peas. (11 in all)
Piranga erythromelas. — First seen; one male.
Petrochelidon lunifrons. — First seen; probably others have been seen that were not identified.
Mimus polyglottos. — Saw a bird July not seen (P. Lister), with special tail, singing, that was have been a Mockingbird, but this record is doubtful.

May 11 — Concluded.

Icterus auricapillus. — First seen; common; singing.
Totanus melanoleucus. — A number seen in shallow water at edge Lake Amelia. Often they waded beyond their depth and had to swim.
Petrochelidon lunifrons. — A good many have built nests; others are just commencing. The marks of these newly begun holes look as if made with a small sharp instrument.
~~Tolmichetes servipennis.~~ — ~~One or two have been seen~~

May 12, 1891. H. H. Snelling, Minn.

√7339. Helminthophila celata. ♂ ad. Not measured. The first seen.
Dendroica pensylvanica. — First seen; several; singing.
Dendroica virens. — First seen; several males.
Mniotilta varia. — Now abundant.
Troglodytes aëdon parkmanii. — Now common.
Sylvania pusilla. — First seen; several males.
Petrochelidon lunifrons. — Abundant.
√7340 Turdus mustelinus ♂ ad. } Mated pair
√7341 " " ♀ ad. } not measured.
√7342 Zonotrichia albicollis ♂ ad. not measured.
√7343 Sylvania pusilla. ♂ ad. " "
√7344 " " ♂ ad. " "
√7345 Dendroica virens ♂ ad. " "
√7346 Colaptes auratus. ♂ ad. " "
√7347 Mniotilta varia. ♂ ad. " "
Mr. Calahan saw a "Cuckoo" to-day. ♂ ♀ must have been Coccyzus erythrophthalmus.

May 13, 1891. Ft. Snelling, Minn.

Cistothorus stellaris. – First seen; one; none could be found yesterday.

May 14, 1891. Ft. Snelling, Minn.

1242 Spermophilus tridecemlineatus ♀ad. Not measured. Contained 11 large, moving fœtuses, which were preserved in alcohol and sent to the Army Medical Museum. There were seven (7) in one side and four (4) in the other.

1243 Lepus sylvaticus ♂ad. Measurements on Table

1244 " " ♂ad. Not measured.

2.45 Tamias striatus griseus ♀ad. Had borne young some time since. Measurements on Table

7348 Vireo solitarius ♂ad. Not measured.

Nonotrichia querula. – First seen; one.

Vireo solitarius. – First seen; two; one shot.

Helminthophila peregrina. – First seen; one.

Dendroica tigrina. – First seen; several.

Geothlypis trichas. – Now abundant.

Cistothorus stellaris. – Now abundant; singing everywhere in the marshes, as are the Long-billed Marsh Wrens.

Dendroica pennsylvanica. – Now abundant; singing.

May 15, 1891. Ft. Snelling, Minn.

7349 Linscalus quiscula æneus ♂ad. Not measured.

7350 Sturnella neglecta ♂ad. do.

1246 Spermophilus tridecemlineatus ♂ad. Molting badly do

May 16, 1891. Ft. Snelling, Minn.

7351 Accipiter cooperi ♂ad. Blue plumage. Stomach contained feathers only. Measurements on Table. Iris cherry-red. Cere yellowish green. Bill bluish-gray at base shading to blackish at tip; feet chrome-yellow. Claws. Claws slate-black. Measurements on Table.

7352 Icterus galbula ♂ad. } A mated pair; not measured.

7353 Icterus galbula ♀ad. }

7354 Spinus tristis. ♀ad. Not measured.

7355 Geothlypis trichas. ♂ad. " "

7356 Helminthophila peregrina ♂ad. " "

(May 16 – 1891 — Concluded.)

7357 Helminthophila chrysoptera ♂ad. } Measurements on Table.

7358 " " ♂ad. }

Iris dark hazel; bill bluish black; feet & claws grayish brown.

7359 Empidonax minimus ♂ad. Measurements on Table

7360 Troglodytes aëdon parkmanii ♂ad. (molting rectrices) do

7361 Turdus aliciæ ♂ad. do

7362 Dendroica æstiva ♂ad. do

7363 Setophaga ruticilla ♂ad. Not measured.

7364 Melospiza lincolni ♀ad. Measurements on Table.

Vireo flavifrons. – First seen; singing; numerous near the Mississippi River.

Sialia sialis. – Young already abroad. The female looks much the worse for wear.

Turdus migratorius. – Several nests with young or sitting birds along the riverbanks; especially found of resting on willows overhanging the water. Several pairs have selected places daily frequented by fishermen who seine and draw their nets out just beneath them without affording them the slightest concern. No young have yet been seen out of nest this season.

Turdus aliciæ. – Two seen together; one shot (male).

Turdus mustelinus. – Abundant; not singing much.

Regulus calendula. – Growing quite scarce.

Sittas, Certhia nor Parus not lately noted.

Troglodytes aëdon parkmanii. – Now common; singing in the woods & swamps about dead timber.

Setophaga ruticilla. – Now abundant; mating; both sexes common.

Geothlypis trichas. – Now abundant; no females seen

Seiurus aurocapillus. – Abundant; mating.

Dendroica coronata. – Only a female seen.

Dendroica æstiva. – Now abundant.

Helminthophila peregrina. – Several seen or heard.

Helminthophila ruficapilla. – One seen.

Mniotilta varia. – Very abundant; both sexes abundant.

Parula erythromelas. – One male; singing.

Hiatula ludoviciana. – Exceedingly numerous.

Melospiza fasciata. – Nest with half-grown young on 9 ult. Young begging food.

Spizella pallida. – Now abundant; Mars Grassland [illegible]

(May 16 — Concluded.)

Lonotriehia ~~leucophrys~~ albicollis. - Only one or two in dull plumage.
Chondestes grammacus. - Now as common as ever usual.
Spinus tristis. - The males are now mostly in full summer plumage, as far as can be judged from seeing them in the trees.
Vireo ~~baltimore~~ gilbula. - Now abundant; both sexes.
Dolichonyx oryzivorus. - Males now abundant.
Corvus americanus. - Breeding.
Otocoris alpestris ~~rufeola~~. - A nest with 5 half-grown young; one with 4 younger birds in it; and one with three eggs nearly ready to hatch.
Empidonax minimus. - Exceedingly numerous.
Tyrannus tyrannus. - Now abundant.
Trochilus colubris. - First seen; one male.
Chaetura pelagica. - Now common.
Accipiter cooperi. - Shot a male (old blue pl.), as it left nest. Climbed up the tree (a large elm) to the nest in triple fork. It was complete, without any lining of bark or other finer material than the small twigs. There were no eggs. Nest 40 ft. from ground.
Colinus virginianus. - Mrs. Mearns saw two across the Mississ. R. in a field beside road. I flushed a ♀ near the Menn. Riv.
Bonasa umbellus. - Drumming constantly.
Botaurus lentiginosus. - Abundant; noisy at night.
Ghizilla socialis. - Singing at night.
Anas discors. - Swim fearlessly around the fishermen on Miss. Riv.

May 17, 1891. Ft. Snelling, Minn.

Piranga erythromelas. - Now rather common.

May 18, 1891. Ft. Snelling, Minn.

Vireo solitarius. - Several; singing.
Vireo flavifrons. - Abundant; singing.
Vireo olivaceus. - First seen; one; singing.
Vireo gilvus. - First seen; several; singing.
Turdus aliciae. - Several seen; shy.
Habia ludoviciana. - Several pairs building nests.

(May 18 — Continued.)

✓7365	Benedura macroura ad.	Measurements on Table.	
✓7366	Colaptes auratus ♂ ad.	do	
✓7367	Sternella magna ♂ ad.	do	
✓7368	" " ♂ ad.	do	
✓7369	Xanthocephalus xanthocephalus ♀ ad.	do	
✓7370	Dolichonyx oryzivorus ♂ ad.	Not measured.	
✓7371	" " ♂ ad.	do	
✓7372	Habia ludoviciana ♂ ad.	do	
✓7373	" " ♀ ad.	do	
✓7374	Turdus mustelinus ♀ ad.	do	
✓7375	Melospiza fasciata ♂ ad.	do	
✓7376	Dendroica galbula ♂ ad.	do	
✓7377	Contopus virens ♂ ad.	do	
✓7378	Vireo flavifrons ♀ ad.	do	
✓7379	" " ♂ ad.	do	
✓7380	Vireo gilvus ♂ ad. ~~Crown plain~~.	do	
✓7381	Regulus calendula ♀ ad. Crown plain	do	
✓7382	Helminthophila peregrina ♂ ad.	do	
✓7383	" " ♂ ad.	do	
✓7384	Geothlypis trichas ♂ ad.	do	
✓7385	Helothaga ruticilla ♂ ad.	do	

Passerina cyanea. First seen. Two males.
Bonasa umbellus. Drumming continually.
Hydrochelidon nigra surinamensis. First seen. Two.
Ammodramus passerinus. First seen.
Contopus virens. First seen. One male.
Vireo flavifrons. - Though not seen before the 16th this species must have been here some days, as the two shot were a mated pair (Nos. 7378 + 7379), the female with ova considerably enlarged.

May 24, 1891. Ft. Snelling, Minn.

Bull Snake, length 1335 mm. preserved in alcohol.

May 19, 1891. Ft. Snelling, Minn.

1247 Sphyrapicus tridecemlineatus. ♂ ad. Not measured. Shot by Chaplain Dolphin. Almost through shedding.

Geothlypis trichas. – Both sexes now common.

Seiurus noveboracensis. – First seen; one.

Hydrochelidon nigra surinamensis. – Several seen.

May 20, 1891. Ft. Snelling, Minn.

7386 Galeoscoptes carolinensis ♂ ad. Not measured.
7387 " " ♀ ad. do
7388 Coccyzus erythrophthalmus ♂ ad. do
7389 " " ♂ ad. do
7390 Turdus ♂ ad. do
7391 Ægialitis semipalmatus ♂ ad. Measurements on Table. Irides dark hazel. Basal half of bill all round, yellow; terminal half of bill black. Feet yellow, joints dusky, claws black.
7392 Dendroica æstiva ♂ ad. Not measured
7393 " " ♂ ad. do
7394 " " ♀ ad. do
7395 Helminthophila peregrina ♂ ad. do
7396 " " ♂ ad. do
7397 " " ♂ ad. do
7398 Cistothorus stellaris ♂ ad. do
7399 " " ♂ ad. do

Chordeiles virginianus. First seen. Several.

Geothlypis philadelphia. First seen. One male.

Turdus fuscescens. – Rather common.

Turdus aliciæ. – One.

Troglodytes ædon parkmani. – Has commenced to build.

Galeoscoptes carolinensis. – The two shot were a mated pair; female contained eggs 8 mm. in diameter.

Setophaga ruticilla. – Both sexes now abundant.

Sylvania pusilla. – One pair.

Seiurus noveboracensis. – Several seen.

Dendroica striata. – First seen; one male.

Dendroica æstiva. – The bulk has now arrived; both sexes.

Piranga rubra. – Has arrived in bulk.

Passerina cyanea. – Males common.

Spizella pallida. – The bulk has now arrived.

Icterus galbula. – They are mated now, & some are commencing to build.

Chaetura pelagica. – Has arrived in bulk.

Coccyzus erythrophthalmus. – These are the first I myself have seen (see antea); very common. The two shot ♂♂.

Bubo virginianus. – Heard at night.

Zenaidura macroura. – Next 2 small young on Pike's Is.

Colinus virginianus. – Common; two flocks and several scattered birds or pairs.

Sterna hirundo. – Mr. Callahan reported a number of white terns on the Minn. River early in the morning.

May 21, 1891. Ft. Snelling, Minn.

1248 Sphyrapicus tridecemlineatus ♀ ad. Not measured. Marginal ⊂ patch filled with milk.

May 22d, 1891. Ft. Snelling, Minn.

Anthomyias crinitus. – Two shot; one had eaten off the tops of a bed of milkweed (Asclepias cornuti), and had a quantity of Apios leaves in his mouth. The milk was freshly exuded from the milkweed stalks. When feeding he would stop frequently and sit up and look around but did not see me, though I stood quite near. He was already fat, with maw crammed full. Now nearly in summer coat.

Sphyrapicus tridecemlineatus. – Nearly in summer coat.

Lepus sylvaticus. – Exceedingly abundant. Saw a female soon to bear young, with enormous abdomen.

Melanerpes erythrocephalus. – Heard on Pike's Is. None seen yet.

Icterus spurius. – First seen; a mated pair.

Regulus calendula. – One without ruby crown.

Helminthophila peregrina. – All thus far noted or shot appeared to be males. A constant singer. Its note a lively trill.

Helminthophila ruficapilla has been very rare this season.

Vireo gilvus. – Now common.

Contopus virens has arrived in bulk.

Habia ludoviciana. – Female sitting on nest; 3 eggs.

Cyanocitta cristata. – Parent sitting on nest; 5 eggs.

(May 22, 1891 (Concluded) H. Snelling, Minn.)

Cistothorus stellaris. — Very common; not confined to marshes, but found in wooded uplands also.

1249 Arctomys monax ♂ ad. Measurements on Table (Pike's Island.)

1250 " " ♂ ad. No tail. do (Post Road.)

17400 Porzana carolina ♀ ad. Eggs considerably developed. ~~Measurements on Table~~ One of two (the other a male too stale to skin, this one fresh) picked up dead under telegraph-wire back of my house: Not measured. Weight 3 dr. avoir. Last fall several were killed against lamp at canteen (now used as commissary) building.

7401 Hydrochelidon nigra surinamensis. ♀ ad. Not measured.

7402 " " " ♀ ad. do

7403 " " " ♂ ad. do

7404 Vireo olivaceous. ♂ ad. Measurements not taken.

7405 Stelgidopteryx serripennis ♂ ad. do

7406 " " ♀ ad. do

7407 Icterus spurius ♂ ad. do

7408 Icterus galbula. ♂ ad. do

7409 Vireo gilvus ♂ ad. do

7410 Setophaga ruticilla ♀ ad. do

7411 Geothlypis trichas. ♀ ad. do

7412 Helminthophila peregrina ♂ ad. do

May 25, 1891. H. Snelling, Minn.

7413 Molothrus ater. ♀ ad. Not measured.

7414 " " ♀ ad. do

Iris, grayish brown. Bill & feet slaty black.

7415 Piranga erythromelas ♂ ad. } Mated pair. Not measured.

7416 " " ♀ ad. } do

7417 " ♂ ad. } Mated pair. do

7418 " ♀ ad. } do

In the males the irides are Vandyke brown. The bills are olive-gray tinged with tawny olive on sides and below; ridge of culmen dusky near tip. Feet plumbeous; claws dusky plumbeous. The females have these parts similarly colored, though the bill is more olivaceous and lacks the tawny shade.

7431 Porzana carolina ♂ ad. Not measured. Picked up under telegraph wires near my house.

May 25 — Continued.

7419 Passerina cyanea ♂ ad. } a mated pair.

7420 " " ♀ ad. }

Male with iris dark hazel. Bill with maxilla black; mandible bluish flesh-color, ~~lined~~ with a narrow black line on ridge of gonys. Feet black.

Female with maxilla brownish black; mandible yellowish flesh-color, lined with dusky on ridge of gonys. Feet brownish slate-color.

7421 Sylvania pusilla ♀ ad. Crown black. Not measured.

Iris very dark brown. Bill with maxilla brownish-black; mandible flesh-color, becoming dusky at tip. Feet pale yellow; claws pale brown.

7422 Sylvania canadensis ♂ ad. Not measured.

7423 " " ♂ ad. do

Iris very dark brown; bill with maxilla brownish black, mandible flesh-color, becoming pale purplish gray towards tip. Feet pale yellow; claws colorless.

7424 Setophaga ruticilla ♂ juv. Not measured.

Iris very dark brown. Bill black, ~~faintly~~ slightly brownish below; feet brownish black, with grayish tinge.

7425 Compsothlypis americana ♂ ad. Not measured.

Iris, hazel; bill, brownish black above, below ~~deep~~ yellow; feet, brownish yellow; claws grayish brown.

7426 Dendroica virens ♀ ad. Not measured.

Iris hazel. Bill black. Feet grayish brown, yellowish on soles; claws brownish black.

7427 Turdus ~~[illegible]~~ ? ♀ ad. Not measured.

Iris dark hazel. Bill brownish black, flesh color at base of mandible, edge of mouth yellow. Feet flesh-color, tinged with brownish gray.

7428 Dendroica striata ♂ ad.

Iris very dark brown. Bill with maxilla black; mandible pale yellow at base shading to pale grayish apically. Feet yellow. Claws brown.

Turdus swainsoni. — First seen; several.

Compsothlypis americana. — First seen; one male.

Sylvania canadensis — First seen; several.

7429 Cliviicola riparia ♀ ad. Not measured.

7430 " " ♀ ad. do

May 26, 1891. Ft. Snelling, Minn.

Myiarchus crinitus. — First seen; several.

1251 Hesperoniys leucopus ♂ ad. Measurements on Table. Skull.

1252 " " ♂ juv. Not measured. No skull.

1253 " " ♀ juv. do do

May 27, 1891. Ft. Snelling, Minn.

17432 Botaurus exilis. ♂ ad. Measurements on Table.

17433 " " ♀ ad. do

In the male the iris is straw-yellow. Mandible along ramus, and region in front of and around eye, flesh-color, lined with grayish below the eye. Bill chrome yellow along commissural line, bordering both mandibles; above yellowish brown shading to dusk towards tip. Feet yellowish green anteriorly, olivaceous on front of tarsus; posteriorly, chrome yellow. Claws light grayish brown. The female has these parts quite similar, though duller & darker. The lining of wings is whiter in the male, having a single row of buffy feathers, the female having several rows, and a grayish tint. Stomachs packed full of partially digested insects, tubing gauzy wings that appeared to be dragon-flies. The female was slightly larger than the male.

17434 Podilymbus podiceps ♂ juv. (the largest spec.). Not measured. Stomach distended with insects having gauzy wings (Shad-flies or dragon-flies?), and a red-colored crawfish.

17435 Podilymbus podiceps. ♂ juv. Not measured. Stomach contained insect remains.

17436 Empidonax minimus ♀ ad. Not measured.

17437 Troglodytes aëdon parkmanni ♂ ad. Not measured.

17438 Icterus spurius ♂ im. Feminine garb, with black throat.

17439 Xanthocephalus xanthocephalus ♂ ad. Not measured. Parent of set No.

May 30, 1891. Ft. Snelling, Minn.

17446 Xanthocephalus xanthocephalus ♂ ad. Parent nest No. Set 4. Mated with No. 17445 ♀ ad.

17447 Hydrochelidon nigra surinamensis ♂ ad. Parent of nest No. Set 3.

Podilymbus podiceps. — nests, 7, 3, & one egg, respectively.

May 30, 1891. Ft. Snelling, Minn.

17440 Fulica americana ♀ ad. Parent set No. Set 10. Measurements on Table. Iris mottled, cherry-red.

17441 Botaurus ~~lentiginosus~~ exilis ♀ ad. Measurements on Table.

17442 Gallinula galeata ♂ ad. do

Frontal process & basal half of bill scarlet vermilion. Apical half of bill, legs, & feet, apple-green; the tibia with an area of orange-vermilion just below the feathers; claws slate-black; under surface of toes, gray. Iris hazel.

17443 Botaurus exilis ♂ ad. Measurements on Table.

17444 Xanthocephalus xanthocephalus ♂ ad. Parent set No. 4-2 do

17445 " " ♀ ad. Parent set No. 4. do

Arctomys monax. — One found digging roots in the edge of the Minnesota River. A boy fired with pistol at it, when it swam straight across the river. It swam well, though slowly. As it swam over I thought it was a beaver; but on rowing up close it proved to be a Woodchuck, and when it climbed out on the opposite shore & stopped a moment to rest it was clearly seen. It shook itself vigorously & then started on.

Lepus sylvaticus. — A few days ago Mr. Callahan told me he saw a Rabbit swim across the Minn. River at Mendota.

Tamias striatus griseus. — Found on the Island in red sandstone rocks, in a shallow lake near the Minnesota River, where I spent the day with Irvin Cook, gathering eggs.

Tachycineta bicolor. — Set 4 eggs, ♂ parent shot, but accidentally left behind, when packing up. A nest in tall will stump, on the Island, contained young; and still another had a single fresh egg (not taken). All were woodpecker burrows, with chips at bottom, lined with large feathers of waterfowl.

Stelgidopteryx serripennis. — Nest in Minn. River bank, not opened.

Hydrochelidon nigra surinamensis. — Two sets of three eggs taken; one of two left; several nests without eggs seen.

Botaurus exilis. — Stomach of No. 7441, ♀ ad., contained tails of 4 small fishes, minnows & sticklebacks. This bird had ova nearly ready to be laid. The male had a crop full of insects — dragon-flies?

June 3, 1891. Ft. Snelling, Minn.

1254 Hesperomys leucopus. ♀ad. Measurements on Table. Contained seven (7) nearly grown fœtuses (five in one side, 2 in the other).

Piranga erythromelas. – Took nest with three eggs & ♀ parent.

Dendroica æstiva. – Took nest with 4 (four) eggs & ♀ parent.

7448 Piranga erythromelas ♀ad. Parent of Nest No. Set 3.

7449 Dendroica æstiva. ♀ad. Parent of Nest No. Set 4. Not measured. With faint stripes below, as in males, but unusual in females.

7450 Vireo olivaceous ♀ad. Not measured. Eggs ready to be laid.

Arctomys monax: One climbed Red-berried elder bush, which his weight nearly bent over. When it saw me it slid down in such haste as to tear most of the branches from the stalk. The berries are still very green.

June 4, 1891. Ft. Snelling, Minn.

7451 Chordeiles virginianus ♀ ad. Measurements on Table.

7452 " " ♀ ad. do

7453 Coccyzus americanus ♂ ad. do

Iris dark hazel. Eyelid dark plumbeous, dotted with yellow around the margin. Bill with upper surface of maxilla & extreme tip of mandible, black; greater part of mandible and sides of maxilla for basal three-fifths, deep chrome. Feet bluish gray; claws blackish slate.

7454 Dendroica æstiva. ♀ad. Not striped below. Not measured. Parent of Nest No. Set 4.

1255 Vespertilio subulatus Say. ♂ad. Caught in Post Hospital. Measurements on Table. Skull in skin. Length of head & body 190 mm. Not measured. About as large as rats. Three caught June 3, 1891.

1256 Arctomys monax ♀ juv.

1257 Hesperomys leucopus ♀ juv. Not measured. Gray pelage.

Dendroica æstiva. – Found & took nest & 4 eggs; also saw nest nearly finished.

Selothraga ruticilla. – Found & took nest & 4 eggs.

Galeoscoptes carolinensis. – Found nests with 2, 3 & 4 eggs.

Harporhynchus rufus. – Saw female sitting in a nest in a drooping festoon of grapevine, ten or fifteen feet high.

(June 4 — Concluded.)

Zenaidura macroura. – Nest & 1 egg taken.

1258 Arctomys monax ♂ juv. Head & body 190. Not meas.

1259 " " ♂ juv. do do

June 5, 1891. Ft. Snelling, Minn.

1260 Arricola riparia ♂ad. Measurements on Table.

Vireo olivaceus. – ♀ sitting on 2 eggs.

Esox _____. – Irvin Cook caught Pike measuring 590 mm to base of caudal.

Duck's Egg found in marsh ~~36×34~~ 46×34 mm Cream color.

June 6, 1891.

1261 Hesperomys leucopus. ♂ad. Anterior half of body in fresh summer coat. Posterior half in winter coat.

1262 Hesperomys leucopus. ♂ juv. Gray except a narrow band of fulvous from shoulder to thigh between the white belly & gray back. It has not nearly attained its growth, though containing 5 fœtuses (4 on one side & 1 on the other). The upper half of skin is dark and vascular, the lower half white & prime.

Lepus sylvaticus. – Young size of Rat seen.

Dendroica æstiva. – Took nest & 4 eggs from moss-covered oak.

June 7, 1891. Ft. Snelling, Minn.

1263 Geomys bursarius. ♀ Nursing. Mammæ, $\frac{1-2}{1-2}$ = 3 pairs milk. Measurements on Table. Had borne young. Mammæ contained milk.

7455 Otocoris alpestris praticola ♀ nesting. Brought me by Pvt. Skinner.

Dendroica æstiva. – Three nests, 5 eggs each taken.

Coccyzus erythrophthalmus. – Nest, 2 ♂♂, 2 eggs, the latter taken.

Arctomys monax: – One came out of his hole near where I lay watching a Vireo finishing its nest, ornamenting it with the white covering of spiders' eggs. When I moved, he gave a sharp whistle that was startling.

Tamiasciurus minimus. – Nest & 4 eggs taken.

June 8, 1891. Ft. Snelling, Minn.

1264 Geomys bursarius ♂ad. Some measurements on Table. Caught when excavating for a fish-pond, at post spring.

June 9, 1891. Ft Snelling, Minn.

1265 Tamias striatus griseus ♀ juv. Young of year. Skull not kept. Length to end of caudal vertebræ, 203. Tail vert., 70 mm. Shot in the top of an aspen sapling on bluff of Miss. River.

1266 Sciurus hudsonius ♀ ad. Measurements on Table. ~~Left~~ Was nursing. Very tenacious of life.

7456 Spiza cyanea ♂ ad. Measurements on Table.

7457 Vireo olivaceus ♀ ad. Parent of nest No. Set 3. Measurements on Table.

7458 Sayornis phœbe ♀ ad. Parent of nest No Set 5. Measurements on Table.

7459 Helminthophila chrysoptera ♂ ad. Measurements on Table.

1267 Anricola riparia – ad.? Decayed in trap. Skull (broken), order presumed.

1268 " " – ad.? do do

Sayornis phœbe. – Took nest, ♀ parent + 5 eggs.

Vireo olivaceus. – Took nest, ♀ parent + 3 eggs.

Chætura pelagica. – Breeding in a hollow tree.

Tyrannus tyrannus. – Took nest with 4 eggs.

June 10, 1891. Ft Snelling, Minn.

7460 Chætura pelagica ♂ ad. Measurements on Table. Iris dark hazel. Bill blackish slate. Claws blackish. Feet like gray. (Colors taken from living specimen.)

June 11, 1891. Ft Snelling, Minn.

7461 Spizella pallida ♂ juv. Just able to fly. Set very positive.

Vireo olivaceus. – Took nest with 4 eggs.

Pranga erythromelas. – Found nest + 3 eggs. ♀ sitting. Left nest until parents could be taken, as I had no gun. She sat very closely, and probably could have been captured by hand had a little care been taken. She kept close at hand, calling chip-churr, chip-churr, but was not answered by her mate. Her wings were usually dropped a little, below the tail.

Sciurus novebracensis. – Two pair seen; young abroad. A parent flew right into my face, just as I flushed one of her young from the ground at the foot of a stump.

Coccyzus americanus. – One pair in Miss. River bottom.

June 11 – Concluded.

Myiarchus crinitus. – A pair breeding in Miss. River-bottom below the mouth of Minnehaha Creek; but I failed to discover the nest.

June 12, 1891. Ft Snelling, Minn.

1269 Arctomys monax ♂ ad. Shedding; new coat on anterior third of head. Skin vascular, a good deal of short new hair on back, mixed and in patches. Mouth filled with red clover. Measurements on Table. Shot in a wooded ravine.

1270 Tamias striatus griseus ♂ ad. Head + body, 173; hind foot, 37; ear from crown, 12 mm. Tail defective.

7462 Pranga erythromelas ♂ ad } A mated pair, taken with
7463 " " ♀ ad } nest + 3 eggs. Nest contained 3 eggs yesterday. Measurements on Table.

7464 Corvus americanus ♂ ad. Measurements on Table.

7465 Pranga erythromelas ♂ ad. do

Mammals collected by Louis Zorga Micanz

No. 1 Vespertilio leucopus juv. 1891. Ft. Snelling, Minn. Sent to Am. Mus. N.H.

No. 2 " " ♂ juv. June 4, 1891. do

No. 3 Mus musculus Ft. Myer, Virginia.

June 16, 1891. Ft. Snelling, Minn.

7466 Harporhynchus rufus ♀ juv. Recently from nest, Iris gray. Sat in a Euonymous bush, looking like an owl. When I tried to catch it, it flew up a hill, alighting in a low branch, where I shot it. At my shot, the parent, before unseen darted after it from a limb above giving me the impression that two birds had been killed by my shot. Running forward I saw the parent beside her dead offspring uttering loud lamentations. This immediately brought her mate and a red-eyed Vireo ♂ from a neighboring overhead to her side. When I appeared, both birds assailed me, with swelling throats, and making such an outcry that every bird in the neighborhood seemed, appeared on the scene, most of them assisting to increase the general din.

(June 16, 1891 - Continued.)

Vireo flavifrons. - Two pairs seen; one in a swampy bottom among cottonwoods and willows, the other on the highest & driest part of the river-bank in woods of oak, basswood, hornbeam and aspen. Both were nesting, following me about within a few yards distance, expressing their dislike in deep guttural tones, with yellow throats distended and vibrating like the Wren's. Despite much watching, waiting, and searching I could not see their nests.

Mniotilta varia. - The males are singing. No young yet noted abroad. Very common.

Seiurus aurocapillus. - Breeding very abundantly. A pair of old birds came flitting on the ground about my feet every little way, though I saw no nests. Young not yet out of nest.

Helminthophila chrysoptera. ♂ ad.

Coccyzus erythrophthalmus. - No. 7467 was about to lay in a newly finished nest, in small willow, near the trunk, about 15 feet above the ground. Shot by accident.

Bonasa umbellus. - Heard drumming regularly of late.

Buteo latissimus. - Occasionally seen. Nests on reserve.

Dryobates villosus. - Only one or two pairs seen in June. They bred here quite rarely.

Dryobates pubescens. - Breeds very abundantly. Young not yet seen abroad.

Sphyrapicus varius. - Commonly seen for a week past; but during the preceding fortnight not often noticed, that period probably corresponding to the time of setting. After the young are hatched they are kept busy feeding them, and are commonly seen, though comparatively quiet at this season.

Chaetura pelagica. - During rainy weather the birds seem to feed close to the ground, usually in pairs.

Trochilus colubris. - Early in June a pair of these birds furiously attacked me when gathering the first wild roses. Their nest must have been close at hand but I did not see it.

Tyrannus tyrannus. - Saw one battering an Red-tail; afterwards joined by another Kingbird. On June 14th I saw a Kingbird attack a Bank Swallow, striking it several times and driving it to the ground in a potato field.

Contopus virens. - Breeding commonly.

Empidonax minimus. - This, the only species of the genus found in this region, is extremely abundant.

Tachycineta bicolor. - Young of 2d brood have just hatched in a nest in the post garden. Others are just preparing for [illegible] nests, seen mounting upward & singing an aërial [illegible]

(June 16, 1891 - Concluded.)

1272 Tamias striatus grisei ♀ juv. Young of the year. Length from nose to end vert. of tail 223; tail vert., 85. Stomach filled with acorn meat. Ground contained about a quart of recently swallowed [illegible]

1273 [illegible] June 17, 1891. [illegible] Swelling, Minn.

7467 Coccyzus erythrophthalmus ♀ ad. Meas. on Table.

7468 Helminthophila chrysoptera. ♂ ad.

(June 11, 1891 – Continued.)

[illegible] and cattle. [illegible]

[illegible] so [illegible] feeds.

Petrochelidon [illegible]

Chondestes [illegible] – Several pair [illegible] to breed on [illegible] present country. Sings much on telegraph wires.

Spizella socialis – Nest with young ready to fly.

[illegible] iana. – I do not think there is a [illegible] reserve this year. Last year abundant.

Piranga erythromelas. – A pair began nesting on the top of a small overcup oak, but abandoned the nest when nearly finished. They usually select the thickest spot on some low, horizontal limb, the treetop being an exceptional site.

Ampelis cedrorum. – Abundant in scattered flocks. Small, scattered flocks. Probably breed. Found mostly near water.

Sclerodoptery x serripennis. – Breeding not rare.

Lanius ludovicianus. – Breeds sparingly; but [illegible] distributed.

Vireo olivaceus. – Breeds very commonly.

Vireo gilvus. – Not so common a breeder as olivaceus.

Vireo flavifrons. – Breeds rather commonly.

Dendroica pennsylvanica. – Breeds sparingly. D. æstiva is the only other of the genus that I find breeding here.

Geothlypis philadelphia. – Breeds in Mum. Riv. bottom.

Troglodytes aëdon parkmanii. – Nesting in an old lantern hung up in a dead staghorn sumach in a thicket.

Sitta carolinensis. – Only a few pair found during the breeding season. (June 14th) [illegible] other year.

Parus atricapillus. – Breeding resident.

Turdus mustelinus. – The only one of subgenus Hylocichla for a breeding bird. Abundant.

Myiarchus crinitus. – Nest contained 6 eggs June 19th, 1891.

June 19, 1891. Ft. Snelling, Minn.

1274 – Arctomys monax. Ad. Measurements on Table.

7409 Myiarchus crinitus ♀ ad. Measurements on Table. Parent of set of 6 eggs, measuring 22.1 × 17.1, 22.5 × 17.5, 22 × 17.2, 22.2 × 17.2, 22.1 × 17, 22.1 × 17.4.

Galeoscoptes carolinensis. – Young on wing first seen.

June 21, 1891. Ft. Snelling, Minn.

A nest of Chrysemys marginata was found containing the broken shells of seven eggs, from which young had doubtless hatched. The burrow was oblique and 200 mm deep.

From a dead Pine on Bull Snake (Pituophis [illegible]) 13 eggs were taken by some boys. Three were brought to me. Two were nearly perfect spheres, measuring 33 mm in diameter. The third measured 46 × 29 mm, being of an irregular cylindrical oval shape. They were very thick & tough skinned, resembling, from the a rubber ball. Contents thick & opaque. Preserved in alcohol.

1275 – Tamias striatus griseus ♀ ad. Preserved in alcohol and sent to Army Medical Museum. See antea page 192. May 2, 1891. Shot by Irvin Cooke.

Sent to Army Medical Museum July 1, 1891.

2 specimens Chrysemys marginata (Agassiz). Probably females; put into alcohol alive. Ft. Snelling, Minn. June 20, 1891.

1 " Tamias striatus griseus, mearns. Posterior half of body, with skin (5 Tortures) intact. Ft. Snelling, Minn. April 2, 1891. No. 791 Mearns's Coll.

1 " Tamias striatus griseus (No. 1275), ♀ ad. Contained 5 foetuses, nearly ready for birth (See antea, pp. 192 & 215) Ft. Snelling, Minn. May 3, 1891. Entire animal in alcohol.

1 " Homo sapiens. Foetus (5 or 6 months). Ft. Snelling, Minn., [illegible] 28, 1888.

(Specimens in Museum - Concluded.)

Contained five (4-1)

Fetus. Fort Snelling, Minn.

1 " Vesperimus leucopus ♀ad. [illegible] nearly grown fœtuses (5-2). Ft. Snelling, Minn., June 3, 1891 (No. 1254 Mearns Coll.)

1 " Sorricola riparia. ♀ad. Contained five fœtuses (4-1). Ft. Snelling, Minn., Oct. 10, 1890. (No. 1000 Mearns Coll.).

1 " Spermophilus tridecemlineatus ♀ad. Contained eleven (7-4) large, moving fœtuses. Ft. Snelling, Minn., May 14, 1891 (No. 1242 Mearns Coll.).

1 " Spermophilus tridecemlineatus. ♀ad. Contained eleven (6-5) fœtuses, nine of which were as large as grapes, the remaining two being abortive, and of about the size of peas. Ft. Snelling, Minn., May 11, 1891. (No. 1241 Mearns Coll.)

1 " Spermophilus tridecemlineatus. Uterus containing eight (5-3) fœtuses. Ft. Snelling, Minn., May 2, 1889. (No. 804 Mearns Coll.)

1 " Lepus sylvaticus. Uterus just subsequent to parturition. Ft. Snelling, Minn., April 10, 1890. (No. 828 Mearns Coll.)

1 " Lepus sylvaticus. Uterus containing five (4-1) fœtuses, about 25 mm in length. Ft. Snelling, Minn. April 1, 1890. (No. 822 Mearns Coll.).

Molluscs, Batrachians and Reptiles in one of the Copper Tanks from the American Museum.

111 " Bivalve shells (mostly Unio) containing living animals. From shore (Minnesota River side) of Pike's Island, at the point of junction of the Minnesota with the Mississippi River, Minnesota. Early summer, 1888.

13 " Bivalve molluscs (Unios) removed from shells and each wrapped separately in gauze. Shells in Am. Mus. Coll. with numbers corresponding to these. Same time and place as above.

8 " Specimens of Campeloma subsolida, Anth. Living specimens in shells. Same time and place as above.

1 " Necturus maculatus, Rafinesque. Water Dog (S.) Mud Puppy (N.). Minnesota River at Ft. Snelling.

1 True Frog
2 Salamanders with gills
1 Green Snake
2 [illegible] Toads
1 " Frogs
1 " Tiger Tritons (Amblystoma tigrinum (Green.))
1 " Chrysemys marginata (Agassiz). Adult.
1 " " " " Very young.
1 " Amyda mutica (Le Seur). Leather Turtle
12 " Striped Snakes
2 " Blue Racers
1 " Bull Snake + 2 eggs (not of same individual).

Fishes in the Glass Jar.

1 specimen Stizostedion canadense (C. H. Smith). Sauger. Sp. C. Pike. Gray Pike. Pickerel. This may be S. [illegible], but the 2 dorsal fins are about 18 mm 2.
1 " Fork-tailed, whitish, spotted Cat. "Called "Channel Cat."
2 " Small, round-tailed Cats.
1 " Eel (Anguilla anguilla, L.), measuring 850 mm in length
1 " Young Pike (Esox) } Shot in small stream.
1 " Five-spined Stickleback (Eucalia inconstans (Kirtland).
1 " Fundulus
1 " "Black Sucker" (Catostomus
1 " "White Sucker" ("
1 " "Shiner". Hickory Shad (Slender like a Herring).
1 " Deep, sharp bellied Shad (with hindermost ray of dorsal greatly elongated)
1 " Hickory Shad.
1 " "Bream" with anterior ray of dorsal much elongated; body deep.
2 " Crappies
1 " Sunfish.
1 " Rock Bass.
1 " Sheephead.
3 " Jars of small fishes of several species (Young Yellow Perch, Fundulus, minnows, etc.)
1 Yellow Perch from Minnehaha Creek, Minn. Nov. 2, 1891.

17470 Symphemia semifasciata Sex? Shot at Fort Pembina, North Dakota, August 29, 1891. Not measured.

Mammals Collected on the March from Fort Snelling, Minn. to Camp Douglas, Wis. (July 8 to 24, 1891.)

1276 Sciurus hudsonius ♂ad. } Shot in same tree. Oronoco, Olmsted Co., Minnesota
1277 " " ♀ad. } July 13, 1891

No. 1276 measures 325 in length to end vert; tail vert., 127; ear, 14; pes, 52.
No. 1277 " 335 " ; " " 138; " 14 " 51.

1278 Sciurus carolinensis hypophœus. ♀ad. Oronoco, Olmsted Co., Minn., July 13, 1891. Contained two fœtuses. Length to end vert., 480; tail vert., 220; ear, 22; manus, 50; hind foot, 68 mm.

1279 Tamias striatus griseus ♀. Pine Creek, near Arendahl P.O., Fillmore Co., Minn., July 16, 1891.

1280 Lutreola vison. ♀ad. Pine Creek, near Arendahl P.O., Fillmore Co., Minn., July 16, 1891. Length to end of caudal vert., 495; head and body, 335; tail vert., 165; hairs, 185; height of ear above crown, 13; width of ear, 24; hight of ear from notch, 24; tip of nose to angle of mouth, 28; to eye, 23; to centre of pupil, 29; meatus, 53; tip of ear, 72; occiput, 71; end of hind limb, 460; longest whiskers, 50; fore limb from coracoid process, 100; from olecranon, 78; manus, 44; width, 14; cl., 7; hind limb from great trochanter, 140; from knee, 98; pes, 58; width, 16; cl., 6; distance between eyes, 22 mm. This and the following were shot in one spot.

1281 Lutreola vison. ♂juv. Young of the year, and doubtless the progeny of No. 1280 ♀ad. Same place and date. Total length (to end vert.), 485; head and body, 325; tail vert., 169; hairs, 190; ear from crown 13; width, 24; notch, 25; nose to angle mouth, 30; to eye, 24; to centre pupil, 30; auditory meatus, 58; tip of ear, 80; occiput, 78; end hind leg, 455; whiskers, 50; olecranon, 83; coracoid 108; manus, 50; width, 17; cl., 6.5; hind limb, 148; knee, 105; pes, 67; width, 17 claw, 6; between eyes, 24 mm.

1282 Tamias striatus griseus. ♀ad. Root River, near ~~Houston~~ Houston Co., Minn. July 18, 1891. Length, 265 tail vert., 104; ear 11; pes 35 mm.

1283 Sciurus carolinensis ~~leucophœus~~ hypophœus. ♀ad. Parent of three small naked young. Leaf nest in ash-tree, 25 feet above the ground. Measurements on Table. Near Houston, on Root River, Houston Co., Minn. July 18, 1891.

1284 Sciurus c. hypophœus. ♀ad. Near Houston, Root River Valley, Houston Co., Minn., July 18, 1891. Meas. on Table.

1285 Sciurus c. hypophœus. ♂ad. Near Houston, Houston Co., Minn. (on Root River), July 18, 1891. Meas. on Table.

1286 Sciurus c. hypophœus. ♀juv. near Houston, on Root River, Houston Co., Minn., July 18, 1891.

1287 Sciurus c. hypophœus. ♂ad. near Houston, on Root River, Houston Co., Minn., July 18, 1891. Meas. on Table.

1288 Sciurus c. hypophœus. ♀juv. naked young. No. 1283 is the parent. Same place and date.

1289 Sciurus c. hypophœus. ♀ad near Hokah, Root River Valley, Houston Co., Minn. July 19, 1891. Meas. on Table.

1290 Sciurus hudsonius. ♀ad. Mammæ 4 pairs. Not meas'd. near Houston, Root River, Houston Co., Minn. July 18, 1891.

Mammals Collected at Camp Douglas, Wisconsin (July 24 to Aug. 15, 1891.)

1291	Tamias quadrivittatus neglectus	♀juv.	July 25, 1891.	Not measured.
1292	" " "	♂juv.	July 25, 1891.	do
1293	" " "	♀juv.	do	do
1294	" " "	♂juv.	July 25, 1891	do
1295	Vesperimus americanus	♂ad.		Measurements on Table.
1296	" "	♂ad.	July 25, 1891.	do
1297	" "	♂juv.	do	do
1298	Tamias q. neglectus	♂ad.	do	do
1299	" " "	♂juv.	July 26, 1891.	Not ~~measured~~ measured.
1300	" " "	♂juv.	do	Not measured.
1301	" " "	♂juv.	do	do
1302	" " "	♀juv.	do	do
1303	" " "	♀juv.	do	do
1304	" " "	♀juv.	do	do
1305	" " "	♀juv.	July 27, 1891.	do
1306	" " "	♀juv.	do	do

1307 Vesperimus americanus ♀ July 28, 1891. Measurements on Table.
1308 " " ♀ im. do do
1309 " " ♀ juv. do do
1310 " " ♀ juv. do do
1311 " " ♂ im. July 29, 1891. do
1312 Tamias striatus griseus. ♂ ad. do do
1313 " " " ♀ ad. do do
1314 Tamias q. neglectus. ♂ ad. do do
1315 " " " ♀ ad. do do
1316 Vesperimus americanus ♂. do do
1317 " " ♀ ad. } July 30, 1891. do
1318 " " ♀ ad. }
1319 " " ♀ }

Nos. 1317 + 1318 have mammæ $\frac{1-2}{1-2}$ = 3 pairs
No. 1319 is small, but is nursing, there being 3 pairs of mammæ filled with milk.

1320 Sciurus hudsonius. ♀. Some measurements on table. July 30, 1891.
Length 320; tail vert., 143; pes, 49 mm.
1321 Sciurus hudsonius. ♂ juv. Young of year. July 30, 1891.
Length, 313; tail vert., 135; pes, 49 mm.
1322 Sciurus hudsonius. ♂ ad. July 30, 1891. Measurements on Table.
1323 " " ♂ ad. do (no skull.) do
1324 Sciurus carolinensis hypophœus. ♂ ad. July 30, 1891. do
1325 " " " ♂ ad. do do
1326 Vesperimus americanus. ♂ ad. July 31, 1891. { Length to end vert. 177; tail vert., 81; pes, 21.
1327 " " ♂ ad. do { Length to end vert. 166; tail vert., 73; pes, 20.
1328 Sciurus c. hypophœus. ♂ ad. Measurements on Table Aug. 2, 1891.
1329 " " " ♂ ad. do Aug. 2, 1891 no skull.
1330 " " " ♀ ad. do do
1331 Sciurus hudsonius ♂ Aug. 2, 1891. Length 330; tail vert., 143; pes, 51 mm.
1332 " " ♂ juv. do Not measured.
1333 " " ♂ juv. do do
1334 " " ♀ juv. do do
1335 Vesperimus americanus. ♀ im. Aug. 3, 1891. do
1336 Sciurus niger. ♂ ad. Aug. 4, 1891. Measurements on Table. Scrotum and soles of feet purplish black. Iris dark hazel. Claws black at base, shading to horn-color at tip. Shot in white oak woods, in low ground. He lived in a nest of green white oak leaves (on twigs), in white oak-tree.

1337 Sciurus c. hypophœus. ♂ immature. August 4, 1891. Probably young of the preceding year. Length, 463; tail vert., 207; pes, 67 mm.
1338 Tamias q. neglectus. ♂ juv. } Killed at one shot; not measured.
1339 " " ♀ juv. } August 5, 1891.
1340 Scalops argentatus. ♂ ad. Aug. 7, 1891. Measurements on Table.
1341 Sciurus hudsonius. ♂ ad. do do
1342 Arctomys monax. ♀ Young of the year. Not measured. Shot on the summit of Thorn Bluffs, a high butte of Potsdam sandstone 3 miles from Camp Douglas.
1343 Tamias q. neglectus. ♂ juv. } Aug. 12, 1891. Young of the year; not measured.
1344 " " " ♂ juv. }
1345 " " " ♀ juv. }
1346 " " " ♂ ad. } Aug. 12, 1891. Measurements on Table
1347 " " " ♀ ad. } Both females have recently nursed.
1348 " " " ♀ ad. }
1349 Sciurus hudsonius. ♀ ad. Not measured. Skinned for Holzner. Skull in skin.
1350 Vespertilio noctivagans ♀ ad. Aug. 15, 1891.

Summary of Mammals Collected on the Trip:—

1.	Putreola vison (Schreber)	2
2.	Sciurus niger, Linn.	1
3.	Sciurus carolinensis hypophœus, Merriam.	14
4.	Sciurus hudsonius, Erxleben.	13
5.	Tamias striatus griseus, Mearns.	4
6.	Tamias quadrivittatus neglectus, J. A. Allen.	23
7.	Arctomys monax, (Linn.).	1
8.	Vesperimus americanus minnesotæ.	15
9.	Scalops argentatus, Aud. & Bach.	1
10.	Vespertilio noctivagans (Le Conte)	1
	Total — — — — — — —	75.

Birds collected on the March from Fort Snelling, Minnesota to Camp Douglas, Wisconsin (July 8–24, 1891).

7471 Spiza americana. ♂ ad. July 10, 1891. Bell Creek, 3½ miles south of Cannon Creek, Goodhue Co., Minnesota. 174; 273; 89; 67; cul., 15.5; tarsus, 23 mm.
7472 Spiza americana. ♂ ad. July 10, 1891. Cannon River, Goodhue Co., Minn. 175; 270; 86; 65; cul., 14.2; tarsus, 23 mm.

7473 Habia ludoviciana. ♀ ad. Cannon Creek, Goodhue Co., Minn. July 10, 1891. This & the two next were not measured.

7474 Tyrannus tyrannus. ♂ ad. July 10, 1891, Cannon River, Goodhue Co., Minn.

7475 Habia ludoviciana. ♂ juv. July 10, 1891. Cannon River, Goodhue Co., Minn. Not measured.

7476 Agialitis vocifera. ♂ ad. July 10, 1891. Cannon River Goodhue Co., Minn. Length to end of claws, 277; 266; 530; 175; 107; cul., 21.5; rost., 13.3; gape, 23.5; centre pupil, 36; ~~base~~ tip of bill to occiput, 52; base of bill to occiput, 30; height of bill, 6; width of bill, 6.3; diameter of eye, 6.7; head of tibia to end of claws, 120; tibia, 55; bare portion, 17; tarsus, 38; middle toe + claw, 27.5; mid. claw, 6; inner claw, 4.5; outer claw, 4; graduation of tail, 20; wing tip of secondaries to tip of primaries, 10 mm.

7477 Bartramia longicauda. ♂ ad. July 11, 1891. Zumbrota, Goodhue Co., Minn. Length to end of claws, 347; 305; 555; 170; 92; culmen, 29; rost., 20; gape, 39; height, 6.7; width, 9.0. Tip of bill to centre of pupil, 45; to occiput, 63; base of bill to occiput, 33; head of tibia to end of claws, 137; tibia, 60; bare portion, 25; tarsus, 48; middle toe + claw, 30.5; middle toe, 24.5; middle claw, 5.8; inner claw, 5; outer claw, 4.7; hallux with its claw, 13; claw of hallux, 4; graduation of tail, 23; from tip of secondaries to tip of primaries, 5. Bill yellow with tip of both mandibles and ridge of culmen, black. Iris hazel. Legs and feet pale yellowish gray; claws, brownish black. Shot in clover-field.

7478 Spizia americana. ♂ ad. Pine Island, Goodhue Co., Minn. July 13, 1891. 172; 282; 87; 65; cul., 16.8; tars., 23.5; mid. c, 23.

7479 Spizia americana. ♂ ad. Pine Island, Goodhue Co., Minn. July 13, 1891. 173; 270; 85; 66; cul., 16; tars., 22.5; mid. toe + cl., 22.5.

7480 Spizia americana. ♂ ad. Pine Island, Goodhue Co., Minn. July 13, 1891. 178; 282; 89; 69; cul., 14.7; tars., 24; mid c, 23.5 mm.

7481 Pipilo erythrophthalmus. ♂ ad. Oronoco, Olmsted Co., Minn. July 13, 1891. 220; 292; 91; 104; cul., 15.5; tarsus, 30; mid c., 27.

7482 Pipilo erythrophthalmus. ♂ ad. Oronoco, Olmsted Co., Minn. July 13, 1891. 220; 292; 91; 102; cul., 15; tars., 29.5; mid. toe + cl., 27.

7483 Colaptes auratus ♂ juv. Oronoco, Olmsted Co., Minn. July 13, 1891.

7484 Melanerpes erythrocephalus. ♂ ad. Root River at Houston, Houston Co., Minn. July 18, 1891. 248; 460; 142; 87; culmen, 25.5; tarsus, 23; middle toe + claw, 27 mm.

7485 Colinus virginianus. ♂ ad. Root River, near Houston, Houston Co., Minn. July 18, 1891. 252; 380; 115; 67; culmen, 14; tarsus, 33; middle toe + claw, 35 mm.

7486 Piranga erythromelas. ♂ ad. Root River, near Houston, Houston Co., Minn. July 18, 1891. Not measured.

7487 Syrnium nebulosum. ♂ ad. July 19, 1891. Root River, Houston Co., Minn. 485; 1070; 325; 220; culmen + cere, 35; diameter of eye, 18; cere, 16; culmen, 25; gape, 40; tip of bill to centre of pupil, 52; depth of bill, 19; tip of bill to occiput, 82; tibia, 112; tarsus, 55; middle toe + claw, 52; middle toe alone, 36; cl., 20.5; hallux with its claw, 40; cl. of hallux, 18; inner cl., 21; outer cl., 17; graduation of tail, 25. Stomach contained an entire Chipmunk (Tamias s. striatus); also remains of others, swallowed with skin, hair, bones + all.

(7488 pl. 238)

August 22, 1891. Ft. Snelling, Minn.

1351 Mus musculus. ♂ ad. Length 186; tail vert., 94; ear above crown, 12; hind foot, 19.3 mm.

1352 Mus musculus. ♀ ad. Mammae, $\frac{3-3}{2-2}$ = 5 pairs. Length, 175; tail vert., 87; ear above crown, 11; hind foot, 18.

1353 Mus musculus. ♀ juv. half grown. Length, 146; tail vert., 73 mm. These three belonged to one family. They lived in my 'den' whilst I was away on the Camp Douglas trip, and did some mischief! Skull of No. 1353 not preserved.

August 23, 1891. Ft. Snelling, Minn.

1354 Geomys bursarius ♀ juv. (Young of the year. Not measured)

Mus musculus. - Specimen caught to-day had moulted on anterior half of body. The difference in the two coats is slight.

August 29, 1891. Ft. Snelling, Minn.

1355 Mus decumanus. ♂ ad. Aged. Length, 448; tail, 205; pes, 44; ear above crown, 18; tip of nose to occiput, 60 mm. Skin & skull.

Sept. 2,

~~August 2~~, 1891. Ft. Snelling, Minn.

1356 Spermophilus franklinii ♀ (Young of the year?). Length, 345; tail vertebrae, 113; hind foot, 59; ear above crown, 9; tip of nose to occiput, 57; fore limb from olecranon, 64; fore foot (manus), 32; hind limb from knee, 89 mm.

Shells from Oronoco, Minnesota (Olmsted Co.).

✓ Helix multilineatus, Say.
✓ Helix profunda, Say. (the large, banded sp.)
Several species of Unio (5 specimens) to be hereafter determined.
✓ Helix (Mesodon) albolabris (July 13, 1891.)
✓ Succinea obliqua, Say.
✓ Margaritana marginata, Say.
✓ "Anodonta ferussiana, Lea?"
✓ "Unio spatulatus, Lea?"
✓ Unio ventricosus, Bar.

Shells from Root River, Min. (Houston Co.):—

✓ Helix (Patula) alternata, Say.
✓ Helix multilineata, Say.
✓ Helix profunda, Say. (large banded sp.)
✓ Succinea obliqua, Say.
✓ Pomphloma subsolida, Anth.
✓ ~~Bulimus~~ Physa heterostrofha, Say.
Planorbis
✓ Pleurocera Lewisii, Lea. (the long spiral wood shell)
Sphaerium (a very small bivalve).
✓ Unio ventricosus, Bar. (a very large spec. 2 spec.)
The above were collected in July, 1891.
✓ "Anodonta subcylindracea, Lea?" No. 145.

Shells from Corrigan's Ranch or Twin Lakes, Dakota County, Min.:—

✓ 1. Planorbis bicarinatus, Say.
✓ 2. " trivolvis, Say.
✓ 3. " campanulatus, Say.
✓ 4. Physa heterostrofha Say.
✓ 5. Succinea obliqua, Say.
✓ 6. Sphaerium solidulum, Prime. (No. 128)
✓ 7. Pomphloma subsolida, Anth.
✓ 8. Planorbis (Segmentina) armigera, Say. (No. 133)

The above records were carded Dec. 7, 1896.

(There are lists of shells on pp. 79 and 80 & 106)

Sept. 5, 1891.

Fort Snelling, Minn.

Among the birds seen were
Habia ludoviciana. - Fat post spring.
Vireo gilvus
Vireo olivaceus
Turdus mustelinus
Harporhynchus rufus
Merula migratoria. - feeding on mountain ash berries.
Spiza cyanea. - In flocks in wet places.
Piranga erythromelas. - Migrating in flocks.

1357 Lanius striatus grisens ♂ min.
Length, 255. Tail vert., 98; fus, 36.5 mm.

1358 Lanius striatus grisens. ♂ min.
7513 Length 260; Tail vert., 103; fus. 36.

~~1359~~ Falcoscoptes carolinensis ♀ yg. of year; not measured.

1359 Seiurus hudsonius. ♂ Length to end of caudal vertebrae, 335; tail vert, 142; hind foot, 31 mm.

7564 Buteo latissimus ♂ juv. Sides pale brownish. Cere greenish yellow. Bill plumbeous at extreme base rapidly shading to blue black. Claws blue-black. Feet yellow. 407; 880; [illegible]; 180; eul. + cere, 26 cere, 9.5; eul., 18; nost., 17; gape, 31; tip of bill to centre pupil, 37; to occiput, 62; base of cere to occiput, 49; tibia, 79; tarsus, 59; mtc, 44; tog, 30; cl., 15; inner cl. 17; outer cl., 13; hallux with its claw, 34; claw of hallux 17.5; graduation of tail, 17; primaries beyond secondaries 63. Stomach contained an enormous mass of hair and bones, a number of small grasshoppers, a large Katydid + an enormous green + yellow caterpillar, spotted with blue. In the mass of hair I found and preserved the under mandibles (united) and rostral portion of the skull of Blarina brevicauda, one complete mandible and maxillary portion of skull and the extremities of Arvicola

1360 Seiurus hudsonius ♀. Length to end caudal vertebrae, 325; tail vert., 134; hind foot, 49. Stained with bittersweet below.

1361 Seiurus hudsonius ♂ Length 340; tail vert, 134; fus, 50 mm.

1362 Arctomys monax ♂ Length, 510.

Sept 6, 1891. Ft. Snelling Minn.

1363 Sorex cooperi ♀. This little shrew was seen to run out of a hole and seize a grasshopper at the bottom of an excavation. It quickly dismembered the hopper that was nearly as large as itself. It was captured without injury, but died in a few hours. Length to end vert., 91; tail vert, 37 hind foot, 11.7 mm. (Skin and skull.)

Buteo latissimus. - An adult bird sat on a fence-post beside the road in a suburb of Minneapolis. It paid little attention as we drove up. When we got opposite and only twenty feet away I stopped the buggy and showed it to my little boy, who made excited exclamations, whereupon the Hawk turned around on the post and faced us. In a minute or two it bent forward, elevated its tail + voided excrement, then very slowly and deliberately took to flight; but when started it flew with strong, rapid strokes, soon alighting on a dry tree near the road.

Fort Snelling, Minnesota.

Sept. 8, 1891. Ft. Snelling, Minn.

7511 Ceryle alcyon ♀ ad. Not measured.

7512 Porzana Carolina. ♂ ad. Not measured. Killed by striking a telegraph-wire behind my quarters when flying at night. An old bird in good fl. Had probably been dead for some time.

Anas discors. - Male found dead under telegraph-wires.

(7513 p. 226) Sept. 12, 1891. Ft. Snelling, Minn.

1364 Vespertilio subulatus, Say. ♂. Length, 96; alar expanse, 255; wing from carpal joint, 60; ear from anterior base, 12.8; tragus, 6.2 forearm, 37 mm

1365 Vespertilio subulatus, Say. ♀ Length 92; alar expanse 260; wing from carpal joint, 61; ear from anterior base, 12.8; tragus 6.3; forearm 37 mm.
Four were taken from an old roof that was in process of repair. Dental formula:-
$i\ \frac{2-2}{3\ 3}\ c\ \frac{1-1}{1-1}\ Pm$ and $M\ \frac{6-6}{6-6} = \frac{18}{20} = 38$.

1366 Vespertilio subulatus, Say ♀. Put in alcohol.

Sept. 24, 1891. Ft. Snelling, Minn.

Geomys bursarius. - A young one smaller than a chipmunk (T. striatus) was killed to-day by a dog. It measured as follows: Total length 210 Tail, 70 mm.

Dog Fish (Amia calva, L.) caught on spoon-hook.

Many species of shells gathered in Minnesota River.

Oct. 2, 1891. Ft. Snelling, Minn.

Have seen very little of the woods or birds since August. To-day the first Myrtle Warblers (Dendroica coronata) and Juncos (Junco hyemalis) were noticed about.

October 5, 1891. Ft. Snelling, Minn.

Podilymbus podiceps. - Common.

Anas boschas
Anas strepera
Anas americana
Dafila acuta
Aix sponsa
Aythya americana
Aythya vallisneria
Aythya marila nearctica
Aythya collaris
} Seen or shot.

Ceryle alcyon. - Common still.

Porzana carolina. - One picked up under the telegraph wire Sept. 30. It was paralyzed and could not stand for four days, after which it gradually recovered the use of its limbs. It drank water, sipping freely when held in my hand, and eats rice & hominy. Always pecks viciously at ones hands and struggles to escape, this too weak to migrate if let go.

Zenaidura macroura. - Still present.

Falco columbarius. - One seen.

Accipiter velox
Accipiter cooperi
} Have migrated in numbers during the last fortnight.

(Oct. 5, 1891 — Concluded.)

Megascops asio. - Commonly heard.

Syrnium nebulosum. - One shot near the fort a few days ago, by Capt. Hannay.

Colaptes auratus. - Still common. Feeds on ants.

Chordeiles virginianus was last seen Sept. 1. From the time we returned from Camp Doug/as, Wis. until Sept. large flocks were daily seen moving south usually in the afternoon.

Sayornis phœbe. - Still common.

Clivicola riparia
Petrochelidon lunifrons
} Were flying about in numbers for a few days after we returned from Douglas.

Tachycineta bicolor. - Last seen August 31st.

Lanius l. excubitorides. - Still present.

Sturnella neglecta. - One seen. None of magna.

Carpodacus purpureus. - As usual, ~~first seen~~ arrived in numbers at the commencement of the equinoxial storm.

Spinus tristis. - Extremely common of late.

Poocaetes gramineus. - Still common.

Zonotrichia querula. - Has been present for a week.

Zonotrichia albicollis. - Common. First noticed.

Junco hyemalis. - Abundant.

Passerella iliaca. - Common; first noted.

Melospiza georgiana. - Very abundant.

Dendroica coronata. - Abundant.

Pipilo erythrophthalmus. - Common; one shot.

Troglodytes hiemalis. - First seen; one.

Sialia sialis. - Migrating in great numbers.

October 9, 1891. Ft. Snelling, Minn.

1367 Mus decumanus. Fad. Nursing. Two of the young were caught, and were of the size of fully grown Arvicola riparia. Mammae, $\frac{2-3}{2-3}$ = 5 pairs. Length, 397; Tail, 184; pes, 41; ear from crown, 15 mm.

1368 Sciurus hudsonius. ♂. Length, 315; tail, 130; pes, 48; ear from crown, 14 mm.

1369 Sciurus hudsonius ♀ has never nursed. Length, 310; tail, 118; hind foot, 47; ear from crown, 16 mm.

Oct. 9, 1891. Ft. Snelling, Minn.

7514 Zonotrichia albicollis ♀. Not measured.
7515 Pisobiorus palustris ♀. do

Oct. 13, 1891. Ft. Snelling, Minn.

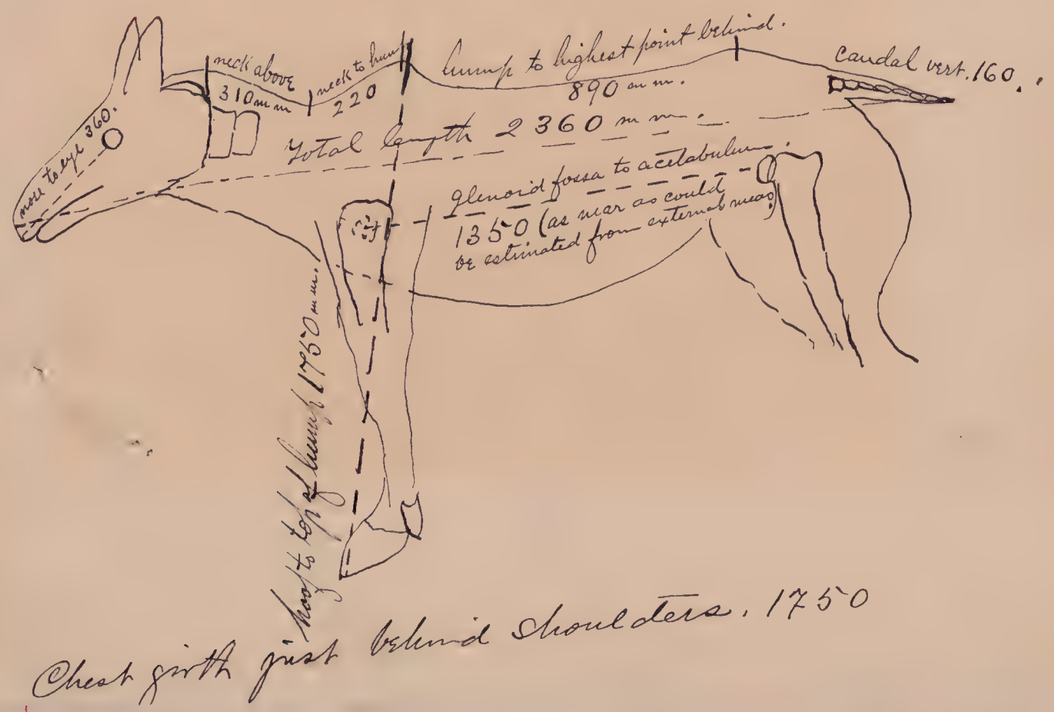
Gallinago delicata. – Still abundant!
Philohela minor. – One seen.

Oct. 20, 1891. Ft. Snelling, Minn.

Anas boschas. – Males of this season are still chiefly in female dress, though all showing signs of the adult masculine plumage. A few have a good deal of green on head and no striped feathers below, though the majority have only a few green feathers on head and the under surface mixed with striped and vermiculated feathers, tho' the chestnut of breast is quite far advanced toward adulescent ~~condition~~ colors.

7516 Phalacrocorax dilophus. Picked up just dead, on bank of Minnesota River, at Ft. Snelling.

No. 1372. ♀ (2½ years?)



Moose Measurements.

1891

Number ---	1370	1371	1372
Sex and age	Nov. 13 ♂ 4 years	Nov. 13 ♀ 2½ yrs	Nov. 20 ♀ 2½ yrs.
Total length (straight) to end of vertebrae of tail	2250	2370	2360
Length of vertebrae of tail	180	160	160
Tail, length to end of hairs	195	200	195
Ear, height from crown	300	365?	
" " " notch	260	283?	
" width	180	170	
From tip of nose to angle of mouth	195	175	
" eye	400	365	360
" centre of pupil	425	383	
" ear	540	505	
" tip of ear	870	810	
" occiput	680	590	
Girth of neck, measured just behind occiput	890	750	
" in front of shoulders	1270	1110	
Length of neck measured above (see diagram)			310
From neck to hump. "			220
From hump to highest point behind			890
From shoulder to hip (approximately glenoid to acetabulum)	1010?	680?	1350?
Chest girth taken just behind fore limbs		1790	1750
Diameter of eye	27?		
Fore limb from coracoid to end of hoofs		1740	
Fore limb from olecranon		1045	
" " " "Knee"	510	530	
Hind limb from great trochanter	1700	1560	
Hind limb from lower end of femur		1280	
" " " tibio-tarsal joint or "hock"	800		
Total length following curves of dorsum	2660	2560	
Height from tip of hoof to top of hump	1820	1760	1750
" " " " to highest point behind	1800		
	Head (skin & skull of) sent to Am. Mus. for Dr. Jenge. Feet kept by Dr. Jenge, who had skin of hind legs made into leggings	Skin of head and neck & skull sent to Am. Mus. Feet and skin of body kept by me. Skin of hind legs made into leggings. "Footpick" bones sent to Am. Mus.	Entire specimen sent to Am. Mus.

(See diagram on opposite page.)

1373 Parascius lencurus ♂ ad. Skull and scalp sent to Am. Mus. Roseau River, Kittson Co., Minn. Nov. 23, 1891. (Sent to Am. Mus.)

1374 Sorvicola sex? . Kittson Co., Minn. Total length 134; tail vert., 36; pes 18.5; Nov. 11, 1891. The Lake (camp at Haystack).

1375 Blarina brevicauda. ♀ ad. Nov. 25, 1891. Scoop's ranch on Roseau River, Kittson Co., Minn. Total length, 128; tail vert, 26; pes, 16.5 mm.

1376 Sciurus hudsonius ♂. Roseau River, Manitoba, Nov. 27, 1891. Length 325; tail vert., 133; pes, 47.5 mm.

1377 Sciurus hudsonius ♀ Roseau River, Manitoba. Nov. 27, 1891. Length, 297; tail vert., 133; pes. 47.

1378 Putorius longicaudus ♂ ad. The Lake (camp at Haystack) Kittson Co., Minn. Nov. 11, 1891. White pelage. Length 452; tail vert., 170. Tip of nose to angle of mouth, 26; eye, 18; centre pupil, 22.5; ear, 44; meatus and, 46; tip of ear, 64; occiput, 61; end of outstretched hinder extremity, 405. Distance between eyes, 17. Ear from crown 15; from notch, 24; width, 23. Fore limb from coracoid, 95; from olecranon, 70; manus 41; longest d. of manus, 10. Hind limb from great trochanter, 123; from knee-joint, 91; pes, 54; longest d. of pes, 6 mm. It was seen leaping high in long grass & brush. It sat up in front of its burrow and was easily shot with rifle.

1379 Alces americanus ♀ ad. Right and left upper molar series of teeth, removed from a rack where placed by the Chippewa Indians, near the Roseau River, in Manitoba. Nov. 25, 1891. Dr. L. A. Jerger has the "bell latch" of this specimen, which the Indians always fasten, streamer fashion to a tall sapling near the racks on which they dry the meat.

1380 Ursus americanus. juv. Skull (imperfect) without mandible. Picked up at an Indian camp on the Whitemouth Trail, near Roseau River, Manitoba Nov. 24, 1891.

1381 Lepus americanus. ad. Skin of head and neck. Hallock, Kittson Co., Minn. Nov. 20, 1891.

1382 Lepus americanus. ♂ ad. Nov. 22, Johnston's cabin, near head of Middle River, Kittson Co., Minn. Caught in a wire snare. Length 488; tail vert., 56 (measurement taken after skinning); ear above crown, 88; pes, 139. Measured by Holzner. Skin & skull complete.

1383 Lepus americanus virginianus. ♂ ad. Same locality as above (No. 1382). Nov. 21, 1891. Not measured.

1384 Lepus americanus virginianus ♂ ad. Same locality as nos. 1382 & 1383. Nov. 17, 1891.

1394 Lepus americanus. ♂ ad. (Hind foot only) Same place & date as No. 1382.

7529 Pediocaetes phasianellus. ♂ ad. Nov. 12, 1891 Kittson Co., Minn. 489; 733; 221; 140; culmen from extreme base ~~22.5~~; tarsus, 41; middle toe & claw, 63 mm.

7530 Pediocaetes phasianellus. ♂ ad. Nov. 12, 1891. Kittson Co., Minn. 481; 721; 26; 138; culmen, ~~22~~; tarsus, 34; middle toe & claw, 59.

7531 Pediocaetes phasianellus ♀ ad. Nov. 12, 1891. Kittson Co., Minn. 437; 698; 208; 123; culmen, ~~23.5~~; tarsus, 42.5; middle toe & claw, 55 mm.

7537 Pediocaetes phasianellus ♀ ad. Nov. 17, 1891. Kittson Co., Minn. 451; 693; 204; 131; culmen, ~~19~~; tarsus, 42.5; middle toe & claw, 54 mm.

7528 Pediocaetes phasianellus. ♂ ad. Middle Fork Two Rivers, Kittson Co., Minn. Nov. 12, 1891. 475; 715; 220; 130; cul. 14.5; nost, 12.5; gape, 20; centre of pupil 39; occiput, 66; base of bill to occiput, 56.5; tibia, 93; tarsus, 47; middle toe & claw, 57. Iris hazel. Bill brownish ~~yellow~~ black, horn-color at base of mandible. Tops grayish, claws brownish. Bare patch in front & above eye, chrome-yellow.

7541 Pediocaetes phasianellus. ♂ ad. Nov. 20, 1891. Kittson County, Minn. 483; 715; 225; 133; culmen, 16; tarsus 36; middle toe & claw, 64 mm. Shot on the wing with a Winchester rifle.

7524 Tympanuchus pallidicinctus. ♂ ad. near Halloek, Kittson Co., Minn. Nov. 9, 1891. Not measured.

1385 Putorius (Lutreola) vison. ♂ ad. Length, 6.60; tail vert., 2.35; tail to end hairs, 2.70; ear above crown, 12; above notch, 25; width, 21; tip of nose to angle of mouth, 35; eye, 25; centre of pupil, 30.5; ear, 57; meatus, 62; tip of ear, 77; occiput, 83; end of outstretched hinder extremity, 590; Chest girth, 150; distance between eye, 23; longest whiskers, 50. Fore limb from coracoid, 131; from olecranon, 92; manus 52; longest claw of manus 6; hind limb from great trochanter, 170; Knee-joint 121; pes, 72 longest claw of pes, 3. Width of tail fully outstrad, 85. Ft. Snelling, Minn. Dec. 6, 1891.

7517 Perisoreus canadensis. ♀. 11½; 16¾; 5⅞; 5⅞ inches. Iris dark hazel. Bill & feet black. Halloek, Kittson County, Minn. Nov. 7, 1891.

7518 Perisoreus canadensis. ♀. 11 7/16; 16; 5 5/8; 5½ inch. Halloek, Kittson Co., Minn. Nov. 7, 1891. Gurdo Dr. Yorke.

7519 Perisoreus canadensis. ♂ ad. 11.87½; 17.75; 6.; 6.12½; ~~9.37½; 14.62½; 4.75; 4.00~~. Halloek, Kittson Co., Minn. Nov. 8, 1891.

7520 Pinicola enucleator. ♂ juv. 9.37½; 14.62½; 4.75; 4.00. Halloek, Kittson Co., Minn. Nov. 8, 1891.

7521 Acanthis linaria. ♂ juv. 5.62½; 9.12½; 3.16⅔; 2.50 Halloek, Kittson Co., Minn. Nov. 8, 1891.

7522 Plectrophenax nivalis ♂ ad. Not measured. Halloek, Kittson Co., Minn. Nov. 8, 1891.

7523 Calcarius lapponicus ♂. Not measured. Halloek, Kittson Co., Minn. Nov. 8, 1891.

7532 Perisoreus canadensis ad. Nov. 13, 1891. Kittson Co. Minn., near Head of North Fork of Two Rivers. 305; 440; 147; 154; cul., 28; tarsus, 35; middle toe & claw, 27.

1386 Sorex cooperi ♀ ad. Nov. 14, 1891. Johnston's Cabin, near head of Middle fork of Two Rivers, Kittson Co. Minn. Nov. 14, 1891. Caught as it ran on the snow, on a frozen muskaeg. Length, 95; tail vert., 32; pes. 12 mm.

1387 Sorex cooperi ♀ ad. Nov. 22, 1891. Length, 91; tail vert., 35; pes, 12.2 mm. Captured by Dr. Louis A. Perega, on a frozen muskaeg (Roseau Muskaeg) Kittson Co., Minn. (near the Roseau River).

1388 Alces americanus ♂ ad. Left horn. A shed horn, picked up near the lake (see map of route) Kittson Co., Minn. Found Nov. 12, 1891.

1389 Alces americanus. ♂ ad. Right horn. A shed horn, picked up Nov. 9, 1891. Kittson County, Minnesota.

1390 Alces americanus ♂ ad. about 5 yrs. old. A pair of horns, with part of skull, killed by an Indian on the Roseau River at the Point d'Orme, in the autumn or late summer of 1891. $4.00

1391 Alces americanus. Hoofs of three legs, removed from the bones at an Indian Rack for drying meat near the Roseau River, Manitoba Nov. 26, 1891.

1392 Bison americanus ♂ ad. Skull without mandible, but with one horn still attached to the bone. Picked up in the muskaeg, beside the lake (see map of route) Nov. 29, 1891. Kittson Co., Minn.

7545 Bubo virginianus arcticus. ♀ ad. Roseau River, at Point d'Orme. Nov. 24, 1891. Length 590; wing, 390; tail, 2.30; culmen from cere, 29; tarsus, 62; middle toe & claw, 77; middle claw, 32.5. Caught in steel-trap set for wolf.

1393 Mephitis mephitica. ad. Roseau River at Point d'Orme. Skull given me by trapper. Caught Nov. 20, 1891. White stripes running whole length on to sides of tail, pattern being as in the Ft. Snelling specimen (No 1080) Sent to Am. Mus.

7536 Tympanuchus pallidicinctus. ♂ ad. Kittson Co., Minn. Nov. 15, 1891. 481; 760; 228; 117; culmen, 15; Tarsus, 54.5; middle toe & claw, 65 mm. Stomach (crop) preserved.

7549 Pediocaetes phasionellus. ♀ ad. near the Roseau River, Manitoba. Nov. 26, 1891. 456; 715; 217; 125; culmen, 16; tarsus, 43; middle toe and claw, 58.5 mm.

7550 Pedioecetes phasianellus. ♂ ad. Roseau River, Manitoba, Nov. 27, 1891. 470; 698; 213; 131; culmen, 16; tarsus, 39; middle toe & claw, 65 mm.

7525 Bonasa umbellus togata. (Head of this also preserved) ♂ ad } Tails only. Camp at the haystack, by the lake, Kittson Co., Minn.
7526 " " " ♀ } Nov. 11, 1891. All shot with
7527 " " " ♀ } rifle, & only tails preserved.

7533 Perisoreus canadensis "♀" Nov. 14, 1891. Johnston's Cabin, Kittson Co., Minn. Measurements on Table.

7534 Perisoreus canadensis "♂" Nov. 15, 1891. Johnston's Cabin, Kittson Co., Minn. Measurements on Table.

7536 Bonasa umbellus ♂ ad (tail only). Johnston's Cabin, Kittson Co., Minn. Nov. 16, 1891. not measured.

7538 Perisoreus canadensis "sex?" (fide Holzner, who skinned it). Johnston's Cabin, Kittson Co., Minn. Nov. 18, 1891. Meas. on Table.

7539 Perisoreus canadensis "♂" (fide Holzner). Johnson's Cabin, Kittson Co., Minn. Nov. 18, 1891. Measurements on Table.

7540 Picus villosus leucomelas. ♀ ad. Johnson's Cabin, Kittson Co., Minn. Nov. 19, 1891. Measurements on Table.

7542 Perisoreus canadensis. "♀". Nov. 23, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7543 Picus villosus leucomelas. ♂ ad. Nov. 23, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7544 Picus villosus leucomelas, ♀ ad. Nov. 23, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7545 Bubo virginianus arcticus ♀ ad. (see over page)

7546. Pinicola enucleator. ♂ ad. Nov. 25, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7547 Picoides americanus. ♀ ad. Nov. 25, 1891. near the Roseau River, Manitoba. Measurements on Table

7548 Dryobates villosus leucomelas. ♀ ad. Nov. 25, 1891. near the Roseau River, Manitoba. Measurements on Table.

7549 Pedioecetes ♀ ad. (see over page 235).

7551. Perisoreus canadensis. "♂" Nov. 28, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7552 Perisoreus canadensis "♂" Nov. 28, 1891. Roseau River, Kittson Co., Minn. Measurements on Table.

7553 Perisoreus canadensis. "♀" Nov. 28, 1891. Kittson County, Minn. Measurements on Table.

7554 Perisoreus canadensis. "♂" Nov. 28, 1891. Johnson's Cabin, Kittson Co., Minn. Measurements on Table.

7555 Perisoreus canadensis. "sex?" Nov. 28, 1891. Johnson's Cabin, Kittson Co., Minn. Measurements on Table.

7556 Perisoreus canadensis. "sex?" Nov. 28, 1891. Johnson's Cabin, Kittson Co., Minn. Measurements on Table.

7557 Pinicola enucleator. ♂ ad. Nov. 28, 1891. near the Roseau River, Kittson Co., Minn. Measurements on Table

7558 Parus atricapillus ad. Nov. 28, 1891. Johnson's Cabin, Kittson's Co., Minn. Measurements on Table.

7559 Pinicola enucleator. ♂ ad. Nov. 28, 1891. Halloek, Kittson Co., Minn. (shot by Dr. Yorke). Measurements on Table.

7560 Acanthis ♂ ad. Nov. 30, 1891. Kittson Co., Minn. Measurements on Table.

7561 Acanthis ♂ ad. Nov. 30, 1891. Kittson Co., Minn. Measurements on Table.

7562 Acanthis ♂ ad. Nov. 30, 1891. Kittson Co., Minn. Measurements on Table.

7563 Acanthis ♂ ad. Nov. 30, 1891. Kittson Co., Minn. Measurements on Table.

1395 Putorius cicognani ad. Picked up at an Indian trapper's camp, Kittson Co., Minn. Nov. 10, 1891. Skull only.

1396 Mephitis mephitica ad. Skull (broken) picked up at an Indian trapper's camp, Kittson Co., Minn. Nov. 10, 1891.

1397 Lepus americanus. ad. Skull (broken) picked up in a trapper's camp, Kittson Co., Minn. Nov. 10, 1891. No skull.

1398 Sorex americanus "im"? Kittson Co., Minn. 1890. Flat skin.

A specimen of Amblystoma tigrinum, Green was taken at Halloek, Minn., Nov. 7, 1891. Species said to be common there. This one was found in a shallow well.

7564 Buteo ~~abb~~ latissimus. ♂ juv (recorded on page 226).

7565 Cyanocitta cristata – juv. Vestling, Mt. Snelling, Minn. Spring of 1891.

1399 Canacus ♂ 1889. Spotted fawn. Kittson County, Minnesota. Color tawny ochraceous, paling to buff on outer surface of limbs & flanks. Below pure white. Upper surface with about four somewhat irregular rows of white spots ~~on back~~ at either side of the vertebral column, extending from shoulders to rump. Neck with a single row of white spots on each side.

Birds Collected at Camp Douglas, Juneau County, Wisconsin (July 24 to August 15, 1891).

7488 Dendroica vigorsii, ♂ad. July 25, 1891. Meas. on Table.
7489 Dryobates villosus. ♀ad. do do
7490 Tyrannus tyrannus. ♂ad. do do
7491 Sylvania canadensis. ♂ad. July 28, 1891. do
7492 Seiurus aurocapillus. ♂ad. July 29, 1891. Not measured.
7493 Colaptes auratus. ♂ juv. Young of the year. July 30, 1891. do
7494 Piranga erythromelas. ♀ juv. do do do
7495 " " ♂ad. do do
7496 Mniotilta varia — juv. Young of the year. do do
7497 " " ♂ad. do do
7498 Parus atricapillus. ♀ juv. Young of the year. do do
7499 Seiurus aurocapillus. ♀ad. August 2, 1891. do
7500 Accipiter cooperi. ♂ juv. Aug. 2, 1891. Measurements on Table. Stomach contained Pipilo erythrophthalmus, etc.
7501 Piranga erythromelas. ♂ad. Changing to winter pl. Aug. 4, 1891. Not meas.
7502 Geothlypis trichas - juv. 1st pl. do do
7503 Dendroica pennsylvanica. ♀ad. Shot in white oaks. do do
7504 Merula migratoria. ♂ juv. Yg. of year changing to autumn. pl. Aug. 5, 1891. do
7505 Spinus tristis. ♂ad. Beginning to change to winter pl. do do
7506 Turdus fuscescens? ♀ad. August 7, 1891. Meas. on Table.
7507 " donalaschkae pallasi. ♀ juv. do Yg. of year. Not meas.
7508 Geothlypis trichas. ♂ad. do do
7509 Helminthophila ruficapilla. — — ? do do
7510 Chordeiles virginianus. ♂ —. Aug. 12, 1891. do
(7511 A. 227)

Frank X. Holzner killed a Canada Jay (Perisoreus canadensis) on the Mississippi River near Ft. Snelling in November, 1891. This is the only instance of its occurrence here that is known to me.

Holzner also obtained a Pileated Woodpecker at old Fort Ripley, Minnesota, in November, 1891.

Lanius borealis. — First seen Oct. 20, 1891, at Ft. Snelling. A spec. was also shot the first monday after the 24th (Oct. ?).

Calcarius lapponicus. — First seen at Snelling Oct. 18.

Measurements of male Canary Bird (not skinned). — 148; 221; 67; 67.5; culmen, 9.5; tarsus, 17; middle toe + claw, 18; claw, 6.5. F. X. Holzner.

Measurements of Putorius ecograni ~~longicauda~~ (No. 83 Holzner Coll.) ~~Ft. Snelling~~, Minn., Mansfield (near old fort Ripley), Minn. ♂. Nov. 17, 1891. White pelage. Length 283; tail vert., 68; fore leg, 42; hind leg, 67; manus, 23; pes, 39; nose to occiput, 46; to ear, 35; to eye, 14; height of ear, 12; breadth of ear, 28 mm. *

No. 84 (Putorius longicauda) ♀. Length 377; tail vertebræ, 128; hind ~~foot~~ leg, 77; pes, 45; nose to occiput, 53 mm. Dec. 18, 1891. Ft. Snelling, Minn.

No. 85. Putorius longicauda. ♂ad. Dec. 25, 1891. Ft. Snelling. Length, 440; tail vert., 166; hind foot, 88; manus, 30; pes, 55 mm.

The above three are all given as measured by Frank X. Holzner.

1400 Sciurus carolinensis hypophæus. ♀ad. Ft. Snelling, Minnesota, November 2, 1890. Skull only.

* Putorius ecograni (No. 83 Holzner Coll.). Nov. 17, 1891, Ft. Snelling, Minn. White with hardly any sulphury tinge, but showing traces of brown summer hat. along the whole upper surface from the nose to the base of the tail.

January 13, 1892. Ft. Snelling, Minn.

Pinicola enucleator. — Two seen, in feminine garb.

1401 Arvicola austerus. ♂ad. ~~Nov. 1890~~. Ft. Snelling, Minnesota (Spec. without label; probably collected in spring of 1891. No record in book.)

Index to specimens of Arvicola in this book. — Nos. 838, 946, 948, 956, 970, 977, 981, 982, 985, 990, 998, 999, 1000, 1005, 1018, 1019, 1020, 1021, 1026, 1027, 1028, 1032, 1056, 1062, 1072, 1073, 1083, 1085, 1086, 1095, 1096, 1104, 1108, 1112, 1144, 1160, 1161, 1162, 1163, 1164, 1165, 1166, 1167, 1168, 1169, 1170, 1193, 1194, 1201, 1260, 1267, 1268, 1374, 1400.

January 21, 1892. Ft. Snelling, Minn.

1402 Sorex pachyurus ♀ ad. Length, 110; tail vert., 42; to end hairs, 47; ear above crown, 4; tip of nose to front teeth, 5; to eye, 13; to occiput 25.5; to end hind limb, 98; fore limb from olecranon 19; manus length, 11; width 3.6; longest claw, 2.4; hind limb from knee-joint, 28; pes length, 15; width, 3.4; distance between eyes, 7 mm

1403 Arvicola riparia ♀. Length, 124; tail vert., 32; ear above crown, 6; tone to occiput, 26.5; to end of hind leg, 130; fore limb from olecranon, 25; manus, 12; hind limb from knee-joint, 35.5; pes, 19;

1404 Evotomys gapperi. ♀. has never suckled young. Length, 121; tail vert., 33; hairs 37.5; fore limb from olecranon, 21.5; manus, 10.7; hind limb from knee-joint, (broken); pes, 18; nose to eye, 10.5; to meatus, 20.5; to occiput, 25; ~~and hind limb~~; (broken); ear, 7.5 mm. Probably young of year, but examine teeth.

1405 Sorex cooperi. ♂ (ad?). Length, 96.5; tail vert., 40; ~~nose to~~ occiput, 20.5; fore limb from olecranon, 14; manus 7.5; hind limb from knee-joint, 23.5; pes, 12.5 mm; ear, ~~3.8~~ 3.6;

1406 Sorex cooperi ♂ ad. Length 102; tail vert., 43; nose to occiput, 21; fore limb from olecranon, 14.4; manus, 7.8; hind limb from knee-joint, 24; pes, 12.8; ear from crown, 3.9 mm.

1407 Sorex cooperi. ♀ ad. Length, 100; tail vert., 39; nose to occiput, 20.5; fore limb from olecranon, 14.5; manus, 7.8; hind limb from knee-joint, 23; pes, 12.5; ear, 3.5 mm

Sorex pachyurus (No. 1402): front and sides of head and body and extreme end of rump, drab; back, ~~blackish~~ closely black, fading to brownish ~~anteriorly~~ anteriorly, becoming drab on front of head; below silvery white, ~~stained with~~ faintly tinged with yellowish brown; manus drab-gray; pes purplish brown; tail purplish brownish black above, with blackish pencil at tip; under surface and sides, front's brown. Tail quite densely clothed with appressed hairs, which nearly conceal the annuli

January 24, 1892. Ft. Snelling, Minnesota.

1408 Sorex cooperi

1409 " "

January 25, 1892. Ft. Snelling, Minn.

1410 Sorex cooperi. ♂ ad. Not measured.

1411 " " ♂ ad. " "

Mimotilta varia. —7127, 7132,

Helminthophila chrysoptera. —6668, 6928.

Helminthophila rufecapilla. —6925, 6926, 6927, 6943, 6944, 6945, 6962, 6963, 6964, 6967,
6968, 6978 to 6985. 7000, 7001, 7002, 7126, 7170, 7204, (p.140)

H. celata. —6837, 6838, 6839, 6840, 6997,
7032, 7033, 7034.

H. peregrina. —6644, 6929, 6940, 6941, 6942, 6969, 6974, 6975, 6976, 6977, 7023, 7024, 7025,

Oporornis agilis. —6998,

Dendroica tigrina. —6916, 6917, 6918, 6919, 6939, 6971,

D. aestiva. —6395, 6625, 6626, 6638, 6639, 6924, 6972, 6986, 7020,

D. coronata. —6841, 6896, 6922, 6923, 6957, 6958, 6959, 6960, 6961, 6987, 6988, 7206,

D. maculosa. —6920,

D. pensylvanica. —6637, 6646, 6921, 7038,

D. castanea. —6999.

D. striata. —6645, 7006, 7007, 7019, 7037, 7063,

D. virens. —6955,

D. vigorsii. —7174,

D. palmarum. —6836, 6886, 6887, 6888, 6889, 6890, 6898,

Seiurus aurocapillus. —7175

Seiurus noveboracensis notabilis. —6543, 6865, 6866, 6970,

Oporornis philadelphia. —6647, 6682, 7039, 7061,
7087, 7143, 7166, 7195.

O. tolmiei. —6667, 6899, 7021, 7022, 7035, 7036, 7071, 7072, 7073, 7074,

Sylvania pusilla. —6624, 6891, 6897, 6930, 6946, 7008,

Setophaga ruticilla. —6641, 6648, 6931, 6932,

Sylvania canadensis. —7030, 7031, 7125,

Galeoscoptes carolinensis.—6633, 6634,

Harporhynchus.—6557, 6623,

Troglodytes aëdon parkmanii.—6653, 6947,

Troglodytes hiemalis.—7200.

Cistothorus stellaris.—6914, 6915, 6948, 6956, 7167, 7213.

Cistothorus palustris.—7123.

Certhia.— 7258, 7259, 7273.

Sitta carolinensis.—6677, 6686, 6687, 7233, 7274, 7275.

Parus atricapillus.—6815, 7254, 6266, 6267.

Regulus calendula.—6933, 6934, 6935, 6965, 7209.

Turdus mustelinus.—6391, 6632,

Turdus fuscescens.—6862, 7018,

T. aliciae.—6907, 6995, 7203.

T. a. swainsonii—7028,

T. a. pallasii.—6578, 6848, 6875, 7136, 7146, 7232.

Merula.—6514, 6515, 6516, 6517, 6528, 6529, 6800, 6816, 7128,

Sialia sialis.—6518, 6519, 6544, 6801, 7216, 7217, 7218.

Number		List of Minnesota Mammals:		
(780)	667	Tamias striatus lysteri	♀ juv. Skull in skin ♀ juv.	July 5, 1888.
(781)	668	Spermophilus tridecimlineatus	♀ ad. Skull in skin	Aug. 5, 1888.
(782)	669	" "	♂ juv. Skull in skin	do
(783)	670	"	♂ juv. Skull in skin	do
(784)	671	Lepus s. sylvaticus (measurements of piece of ear, - left - written)	♂ ad.	Sept 6, 1888.
(785)	?	Sciurus hudsonius	♂ ad. (Measurements on table of Sciurus hudsonius mogollonensis)	March 4, 1889.
(786)	?	" "	♀ ad.	March 5, 1889.
787	?	Arctomys monax	♂ ad.	March 23, 1889.
788 ✓	?	Lepus sylvaticus	♂ ad.	do
789 ✓	?	Sciurus hudsonius	♂ ad.	do
790 ✓	?	Sciuropterus volucella	♀ ad. Weight 1,115 grs.	March 30, 1889.
791 ✓	?	Tamias s. lysteri	♀ ad. Weight 1800 grs.	April 2, 1889.
792 ✓	?	Lepus s. sylvaticus	♀ ad.	April 5, 1889.
793 ✓	1005	Tamias s. lysteri	♀ ad. Contained 4 foetuses.	April 13, 1889.
[illegible] ✓	1006	Spermophilus tridecimlineatus	♂ ad.	April 14, 1889.
[illegible] ✓	1007	" "	♂ ad (bob-tailed spec.)	do
796 ✓	1008	" "	♀ ad.	do
[illegible]	1009	" "	♂ ad.	April 15, 1889.
[illegible]	1010	" "	♂ ad.	do
799 ✓	1011	" "	♂ ad.	do
800	1012	Geomys bursarius	♂ ad (not preserved?)	April 16, 1889.
801 ✓	1013	Sciurus hudsonius	♂ ad.	April 17, 1889.
802 ✓	1014	" "	♂ ad.	Apr. 26, 1889.
803 ✓	1015	Spermophilus franklinii	♂ ad.	May 2, 1889.
804 ✓	1016	" tridecimlineatus	♀ ad (8 foetuses)	do
816	?	Sciurus carolinensis	♀ ad. Camp Hall, near Osseo, Minn.	Sept. 20, 1889.
817 ✓	?	Geomys bursarius	♀ ad. Mt. Snelling.	Oct. 1889.
811 ✓		Lepus americanus	♂ juv. Mora, Minn.	June 15, 1889
[illegible]		Mustela [illegible]	♀ juv. Mt. Snelling	July 10, 1889.
~~818~~ 805		" vison	ad. Skull found on Pike's Island.	1889.

D. coronata 1 + 3 = . . . 4
D. maculosa - - - - . 1
D. pennsylvanica - - - 1
D. æstiva - - - - . . 2
D. palmarum - 1, 5, 1 - - - 7
D. tigrina . . . . . 5 ♂

H. celata 11 - - - - 2♂ + 2♀
H. ruficapilla 9♂ + 1♀
H. chrysoptera - - - - 2♂
H. peregrina - - - - . 5
M. varia
Sylvania pusilla 4 males 4♀
Setophaga ruticilla . 2 males 2♂
S. naevius . 3 3
Geothlypis - - - - 1♂

An Expediition to and Scientific Exploration of the Shores of Hudson's Bay, by way of the Nelson River: the Feasibility of Making Such a Journey and Conducting Such a Physical Examination in a Single Season; with Observations on the Possible Advantage to the ~~service~~ United States Government of such a Knowledge of the Physical Character and Topography of the Region; Together with a Discussion of the Purely Scientific Value of a Comprehensive Knowledge of the Flora and Fauna, and ~~Succession~~ the Characteristics and Limitation of the Successive ~~A~~ Life Zones of the Region to be Traversed.

For American Museum of Nat. Hist. –

1 Eel. (*Anguilla anguilla* (L.))
Length 850 mm.

2 Eye Bull Snake (*Pituophis* ?
Eggs were squeezed from a large "Bull Snake." See Journal, p. 217.

✓ 14 Bivalve shells (mostly *Unio*) with living animals from Shores of Pikes Island (Minn. River side) at junction of Minnesota with Mississippi River, Minnesota. Early summer of 1888.

✓ 18 Bivalve Molluscs (*Unio*) removed from shells & each wrapped separate in gauze. Shells in Am. Mus. Coll., with no. corresponding to these. Same time & place as above.

✓ 8 Specimens of *Campeloma subcrida*, Anth. Living specimens in shells. Same time & place as above.

2 Striped Snakes (2 large, and one small; the latter probably a different species from the others.)

2 Small, round-tailed Catfishes. Ft. Snelling, July, 1888.

1 Bagful of small fishes from Minn. River, April 17, 1890.

1 Small Pike. Shot in stream near Minn. River (Esox).

✓ 1 *Necturus maculatus*, Rafinesque. Mud Puppy (N.) Water Dog (S.) Minnesota River at Ft. Snelling, Minn.

1 *Chrysemys marginata* (Agassiz). Ft. Snelling, Minn.

Fishes in Glass tank: —

15 specimen	Stizostedion canadense (C. H. Smith). Sanger. Sand Pike. Gray Pike. Horn-fish. This may be S. vitreum; but the 2 dorsal has only about 18 rays. Fort Snelling, Minn.
2 " "	Crappies
1 " "	Fork-tailed Cat
1 " "	"Drum", with long spine to anal.
1 " "	"Sucker" (Catostomus)
1 " "	Hickory Shad.
1 " "	Sheephead.
1 " "	Rock Bass
1 " "	Sunfish.
2 " "	Gar.
1 " "	Sharp-billed Hickory Shad.
1 " "	Shiner (Hickory Shad) slender like a Herring
1 " "	Sucker (Catostomus.)
1 " "	Mudfish
1 " "	Stickleback (Eucalia inconstans (Kirtland.)
1 " "	Eel (Anguilla rostrata, L.) measuring 850 mm.
2 " "	Small Round-tailed Catfishes
Bagful	Small Fishes; several species.
1 " "	Young Pike (Esox

Shells from Delaware River Gap
Dec. 10, 1867

6 spec. *Triodopsis tridentata*, Say.
1 " *Mesodon albolabris*, Say.
3 " *Mesodon thyroides*, Say.
—— *Succinea obliqua*, Say.
—— *Stenotrema monodon*, Rackett. } one 1 of each, left by S.S.

			87 fig 2 v	36	4 v	
291 v	20 v	13 v	84 fig 1 v	34 v	6 v v	
197	21 v	33 v	83	35 v	79 in front v	
195	28 v	15 v	258 v	18 v	64 v	
306 v	90 v	79	259	95 v	24 v	
307 v	40 v	✻ 12	87 fig. 1 v	300 v	303	
308 v	255 v	11 v	72 fig. 2 v	301 v	304	
309	64 v 27 v	330 v	89	70 mid. fig	305	
62	303 v	334	81 v	108 v	277 v	
331 v	304 v	43 v	79 upper & fig.	v 104		
125	305 v	✻ 23	80 lower l. fig	106 v	Missing	
281 v	66 v	45 v	80 in front	93 v	103	
68 v	333 v	46 v v	48 v	94 v	203	
19 v	10 v	44 v	49 v	97	82	
22 v	333 [illegible] v	42 v	253 v	107 v	83	
267	17 v	51 v	292 v	101 v	259	
196 v	15 v	50	84 fig. 2 v	102 v	98	
197	14 v	47 v	302 v	100	104	
75 v	16 v	75 (bad fig) v	78 v	2 v	1	
293 v	1, 1 of 1 v	77 v	276 v	98	3 v	
77	196 v	74 v	106	1		
31 v	96 v	86 v	331	7 v		
67 v	332 v	✻ 82	34 v 35 v 32 v	268 v		

750 to 753 Fiber zebethicus. Skull only.
754 (Skin + Skull) " " ♂ ad. May 9, 1889. Ft. Snelling, Minn.
755 to 779 " " Skulls only.
805 Putorius vison. ad. Pike's Id. May 2, 1889. Skull only.
806 Arctomys monax. ♂ ad. May 14, 1889. Ft. Snelling, Minn. (Sk. + Skull.)
807 " " ♀ ad. May 16, 1889. Ft. Snelling. (Skin & Skull.)
808 " " ♂ ad. May 24, 1889. Ft. Snelling. (Skull only).
809 " " ♂ ad. June 1, 1889. " " "
810 Procyon lotor ♂ ad. June 13, 1889. " not preserved.
811 Lepus americanus ♂ juv. June 15, 1889. Mora, Minn. (Sk. + Sk.)
812 Putorius ermanea. ♂ ad. June 25, 1889. belly white Snelling. (Skin
813 " " ♀ juv. July 10, 1889 belly yellow " (Skin
814 Scalops aquaticus argentatus ♂ ad. July 13, 1889. (Skin + Skull)
815 Putorius ermanea ♂ . July 13, 1889. belly yellow (Skin
816. Sciurus c. ♀ ad. {Camp Hale near Osseo, Minn.} Sept. 20, 1889. (Sk. + Sk.)
817 Geomys bursarius. ♀ ad. Snelling. Oct 27, 1889 (Sk. + Sk.).

For Army Medical Museum

2 specimens: Chiropterus marginata (Geoffroy).
Ft. Snelling, Minn. June 20, 1891. Probably female.

1 " Vampyrus striatus grisens, Meams. Posterior half of body, showing 5 fœtuses intact. Ft. Snelling, Minn., April 2, 1889. (Skin & skull No. 791, Meams Coll.)

1 " Phyllostomus hastatus June 8, 1888. Ft. Snelling, Minn.

1 " Molossus Cestonii ♀ad. Seven nearly born fœtuses (5-2). Ft. Snelling, Minn., June 2, 1891. (Skin & skull No. 1254 Meams Coll.)

1 " Nycteris Thebaica. ♀ad. Contained large, moving fœtuses (7-4) Ft. Snelling, Minn. May 14, 1891 (Skin and skull No. 1242 Meams Coll.)

1 " Synotheles Trifoliatus ♀ad. Contained nine fœtuses as large as peas and two small, abortive ones as large as peas (6-5) Ft. Snelling, Minn. May 11, 1891 (No. 1241 Meams)

1 " Vampyrus striatus grisens. ♀ad. Contained 5 fœtuses (-1 nearly ready for birth (No. 1275 my coll. See pp. 192 & 215) Ft. Snelling Minn. May 3, 1891. Entire specimen in alcohol.

1 " Noctilio labialis ♀ad. Contained 5 fœtuses (4-1) Ft. Snelling, Minn. Oct. 10, 1890. No. 1000 Meams' Collection.

1 " Lepus cuniculus. Uterus just after parturition. Ft. Snelling, Minn. April 10, 1890. No. 828 Meams Coll.

1 " Lepus cuniculus. Uterus containing five (4-1) fœtuses, about the size of a walnut. Ft. Snelling Minn. April 1, 1890. No. 822 Meams Coll.

(over)

Reptiles and Batrachians in the Coffin Tank from American Museum.

1	specimen	Natrix acuiatus, Kennicott. Mud Puffing.
2	"	Toads
12	"	Frogs
3	"	Tiger Salamanders
1	"	Chrysemys marginata (Agassiz.) adult
2	"	" " " Very young
1	"	Soft Shelled Turtle.
10	"	Striped Snakes
2	"	Blue Racers.
1	"	Bull Snake & 2 eggs (not opposite this specimen).

1 specimen Diamondback Watersnake. Mine contains eight (8) fishes (2–3). Mud sucker. Mon. 2.1889. No. 804 Museum Collection.

1 " Leptosoma Striatum (4–1) Mt. Sterling, Illinois. Tortoise fish of Jones.

Human Skeletons from the Cave-Dwellings of Arizona.

Sent to the American Museum N.Y.

Nos. 1 to 5 are the lot I dug out with Daniels in the big Cave-tomb on Bear Creek.

"C" is the Tonto Apache Skull that Major E. K. Otey gave me. From Verde Reservation

"a" is the skull that Daniels had in his Spring at Fossil Creek. It may not be a Cliff-dweller. Daniels thought it was a Tonto-apache, although he found it at the bottom of a cliff filled with caves.

No. "f" came from tomb on little peak opposite engine-house, Ft. Verde

Urubitinga anthracina
Set 2 of 3 measuring 50 X 62 ; 58 X 60 mm.
Obtained on Tonto Creek, Ariz.
May 18, 1888.

Mogollon Mtns, Ariz.

Nest of Cardellinus rubrifrons from Woods's Stock Ranch. ~~Mogollon~~

Nest in a cañon whose walls were wooded with spruce-trees, beneath which the nest was placed, upon the ground, amongst some flowering honeysuckles which entirely covered and concealed it. The old bird flew from the ground at my feet, but it was only after a prolonged and close search that I found her nest. It rested on a mass of dry leaves and spruce needles. Outside diameter 130 mm. Inside diameter 45 mm. depth outside 55 mm. depth inside 30 mm. The eggs measure respectively 13 X 16; 13 X 15.5; 16 X 13.5; 16 X 13. They are spotted with reddish-brown upon a white ground, the spots being aggregated and heavier about the larger extremity, ~~the~~ and the underlying markings having a purplish color.

The nest is well built, being composed of a neatly felted mass of plant-stems and strips of fine bark, lined with soft vegetable fibres and cow hairs.

over

cussed in such prosaic fashion as to whisper ~~offer~~ a few suggestions of the ~~the~~ elegant and dashing career ~~that were~~ so near at hand. After resting from a fatiguing ride, I set out in company with this tiny brook, whose banks were in truth "set with willow weed and mallow", but whose subsequent history has never been any Poet Laureate Alfred Lord Tennyson. It led me by stealthily ~~out~~ from ~~out of~~ the flowery meadow into a ravine that gradually deepened into a canon having rocky walls upon which the hundreds scattered lazaids were flaunting in the summer sunshine and displaying their gorgeous ~~orchard~~ hues. The floral conditions are quickly changed, as by the some magic power of my little companion, the brook.

So suddenly the panorama shifted, that it seemed as if the little brook possessed ~~some~~ ~~the~~ some magic power of transformation, at every angle ~~of~~ its devious course.

Entering one of several side ravines that joined ~~the~~ this canon, I stopped to gather some flowering honeysuckles that covered the ground beneath the spruces ~~on the hillside~~ when a ~~red little bird~~ red-faced Warbler was flushed from its nest upon the side of the road. Close to the trunk of a large spruce. It alighted in a small tree, uttering a sharp, hard

United States Department of Agriculture.

DIVISION OF ENTOMOLOGY.

Washington, D. C., March 6th, 189

Capt. Edgar A. Mearns, U. S. A.,

Fort Snelling, Minn.

Dear Sir:

Your letter of February 25th enclosing fragments of a butterfly captured in Arizona is duly received. The butterfly is Heterochroa californica Butler.

Yours very truly,

C. V. [illegible]

Entomologist.

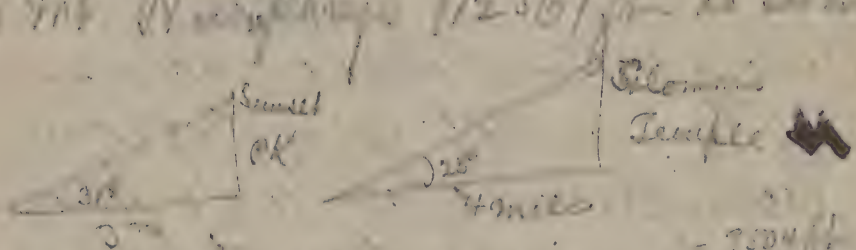
Heights given by Parke,
Grand Cañon Colorado.

Solomon's Temple, Ariz, 6250 ft above river
Pyramid ariz, 4200 " " "
or 3900 " " house
Colorado River 1230 ft above sea level.
House 300 ft. above Col. River
Falls in Diamond Cr. 900 ft. ab. " "
From Diamond Cr. to mouth Cañon
120 m, from same point to head of
Cañon, 200 m., to Needles 300 m

According to Powell, mouth of
Diamond Cr. is 646 miles from
mouth of Col, is 1310 above sea
level & the fall in Col. at that
point is 10 feet per mile.
Colorado plateau, ariz. is 6,000 to 8,000
feet above sea level.
Kaibab plateau 8,000 ft.

Tribal Pleasure on the Old
North side & Blocks passing
the South end of Nevada Bluffs
which is 1½ M. of the Sau
Bernardino Peak

The height of San Bern. Peak
is 7ft Neighbors 12561 ft above



$= 9204$ ft

$\frac{\text{Sunset PK}}{\text{S. Bat. Bluffs}} = \frac{3 \tan 31°}{4 \tan 28°} = \frac{3 \times .60206}{4 \times .53171} = \frac{1.8062}{2.1268}$

$2\frac{1}{2} \times 28° = \frac{5}{2} \times .53171 = 1.32925$ m

$= 7000$ feet

$2\frac{1}{2} \times 28° = 2.5 \times .53171 = 1.06342$ m

$= \text{or } 5556$ feet

Height of Sunset PK $= 2\frac{1}{2} \tan 31° = \frac{5}{2}(.60206) = 1.50515$ m

$= \text{or } 7920$ ft

$= 2 \tan 31° = 2(.60206) = 1.20412$ m

$= \text{or } 6336$ ft

$= 2\frac{1}{4} \tan 31° = \frac{9}{4}(.60206) = 1.35463$ m

$= \text{or } 7128$ ft

This was in a notebook of the year 1888.
Arctomys? Procyon?
Compare measurements
I bought this paper in St Paul, Minn.
I got a Procyon in Jan. 1892, tail frozen
in cliff of Nuiz, R. See if it is that. Jan. 1903
E.A.M.

615
4[illegible]
154
217
1[illegible]
[illegible] 250
[illegible] 74
[illegible] 49
[illegible] 22
[illegible] 32
[illegible] 8
[illegible] 1[illegible]
[illegible] 40
[illegible] 48
[illegible] 53
[illegible] 90
[illegible] 94
[illegible] 123
[illegible] 105
[illegible] 130
171
140
71
22

235
156
91
27

9.2, 11, 12, 11.5, 15.5

13.5, 15, 13, 12

This was in a notebook of the year 1888.

Otter?

Baird

No.	Locality	Breadth of bill	Weight (20 to 25 lbs. Coues.)	Nose to eye						Nose to ear	Manus	Pes
	Coues. — Usual range —	457		44 / 51	1119 / ~~101~~ / 1371 / ~~144~~ / 1524	914		457		89 / 102	89	102
	Maximum —				~~127~~							
475	Montezuma Well, Ariz.		19 7/16	44	1300	815	472	487	155	95	87	146
477	Verde River, Arizona.				1290						94	145

NOTES ON MAMMALS AND BIRDS

IN THE VICINITY OF FORT SNELLING, MINNESOTA. JUNE 1st to JULY 6th, 1888.

?Lynx rufus. "WILDCATS" are said to be common hereabouts, living in brushy woods.

Canis lupus. GRAY WOLF. MR. LeClair saw one in the Minnesota River bottom, on the post reservation, last winter. Mr. Trapp, a farmer living two miles east of Fort Snelling, across the Minnesota River, tells me that the wolves have recently interfered greatly with sheep raising in his neighborhood, having killed nearly all of the sheep kept by himself and his neighbor, last winter. The wolves are most troublesome in cold winters, when the are hard up; then they prowl around the brushy edges of the timber, in the vicinity of farm-houses, often playing familiarly with dogs. They appear to fully understand the significance of the gun, and depart instantly on sight of one, or of any suspicious movements on the part of man. Mr. Trapp tried in vain to inveigle them into taking poisoned baits, and only succeeded in killing his own shephard dog; the wolves would not touch it. When driving along lonely roads, one often runs upon one crossing the highway, between two bits of woodland, but they are both sneaking and shy, save when driven to extremities by cold and hunger.

Vulpes virginianus. "RED FOXES" are said to be rather numerous.

BATS.- I have observed at least two species, but have taken no specimens nor identified the species seen.

Sciurus carolinensis. GRAY SQUIRREL; BBACK SQUIRREL.-Common. Said by all the people to have been entirely absent from the region about here until three or four years ago, when thee occurred a general immigration, and the species at once became abundant everywhere. The number of black ones is small as compared with the gray, but a small percentage is regularly observed. Mr. Mede Le Blair, who attends to the drawbridge, on the Minnesota River, says that he has several times seen them cross the river on (the bridge.

Spermophilus 3-decimlineatum. THREE-LINED GOPHER. Everywhere common, and probably the most abundant mammal in the region. Young were observed as early as June 16th. A State law provides a bounty of pre head for their destruction, on account of their injury to agriculture.

Spermophilus (franklinii). GRAY GOPHER. I have only seen one of these Spermophiles in the post, but am told that they are rather common, and that a bounty is also paid for their extermination.

Tamias striatus. CHIPMUNK. A very common species. A young of the year, killed July 5th, was two-thirds as large as its parents.

I have not yet seen, heard, of heard of the RED SQUIRREL (Sciurus hudsonius) nor the FLYING SQUIRREL.

Arctomys monax. WOODCHUCK: GROUND HOG. Very common.

Geomys bursarius

Thomomys ~~(talpoides?)~~. "POUCHED GOPHERS" are said to be exceedingly troublesome. I have not examined the animal itself, but hav observed its mounds everywhere.

HOUSE RATS AND MICE are the only Muridae that I have yet seen, excepting the ubiquitous MUSQUASH or MUSKRAT (Fiber zibethicus).

Lepus sylvaticus. GRAY RABBIT. Said to be quite abundant. I have seen none of them here yet.

Lepus americanus. NORTHERN HARE. Said to have been formerly very fairly common, but now scarce. I have seen none. Mr. Neusser killed several, last winter, a few miles west of Fort Snelling, at 9-mile Creek. They were in a fresh clearing, under brush, in the snow; they were white.

Canis latrans. COYOTE; PRAIRIE WOLF. Mr. Neusser says he has frequently shot them here; but they are now becoming scarce, as are most of the large mammals in this vicinity. Mr. Neusser has shot several GRAY WOLVES here, during the past few years: also a few RED FOXES.

Cynomys ludovicianus. COMMON PRAIRIE DOG. This interesting species, so Mr. Neusser informs me, has recent ly disappeared from the prairies of Western Minnesota, where it was abundant a few years ago, before the country was settled; but they have retreated before civilization .

Mephitis ~~mephitica~~ mephitica. COMMON SKUNK. Very numerous.

Procyon lotor. COMMON RACCOON. Their tracks are numerous beside the Minnesota River, on the reservation.

Anas boschas
?
Hydrochelidon nigra surinamensis.

Fulica americanus
Rallus virginianus.
Actitis macularia.
AEgialitis vociferus.
Prairie Hen.
Bonasa umbellus.
Geothlypis trichas.
Oltyx virginianus.
Mniotilta varia.
Ectopistes migratorius.
Dendroica aestiva.
Zenaidura macroura.
?Siurus naevius.
Bubo virginianus.
Siurus aurocapillus.
Buteo borealis.
Melanerpes erythrocephalus.
Colaptes auratus.
Picus pubescens.
Chaetura pelasgia.
Ceryle alcyon.
Chordeiles virginianus.
Caprimulgus vociferus.
Coccyzus erythrophthalmus.
Tyrannus carolinensis.
Contopus virens.
Myiarchus crinitus.
Sayornis fuscus.
Empidonax minimus.
Corvus americanus.
CYAnocitta cristata.
Otocoris alpestris.
Quiscalus purpureus aeneus.
Agelaius phoeniceus.
Xanthocephalus xanthocephalus.
Molothrus ater.
Dolichonyx oryzivorus.
Icterus galbula.
Icterus spureus.
Sturnella magna.
Pipilo erythrophthalmus.
Habia ludoviciana.
Spiza cyanea.
Chondestes gramineus.
Spinus tristus.
Poocaetes gramineus.
Melospiza fasciata.
Spizella domestica.
Passer domesticus.
Piranga aestiva.
Ampelis cedrorum.

Progne subis.
Clivicola riparia.
Hirundo horreorum.
Tachycineta bicolor.
Vireo olivaceus.
Vireo flavifrons.
Vireo gilvus.
Lanius ludovicianus.
Geothlypis trichas.
Mniotilta varia.
Dendroica aestiva.
?Siurus naevius.
Siurus aurocapillus.
Troglodytes aedon.
?Cistothorus stellaris.
Sialia sialis.
Turdus mustelinus.
Harporhynchus rufus.
Mimus carolinensis.
Merula migratoria.

SPECIES NOT SEEN,
SAID TO OCCUR:

Nyctea nivaea.
Archibuteo lagopus sancti-johanis.
Aytya valisneria
aythyia americana.
Aythyia marila nearctica.
Erismatura rubida.
Dafila acuta.
Spatula clypeata.
Anas americana.
Anas carolinensis.
Anas discors.
Merganser sp. ??.
Gulls & Terns.

Species Added to First List:

Botaurus lentiginosus.
Ardea herodias.
Philohela minor.
Totanus solitarius.

Circus hudsonius.
Sphyrapicus varius .
Qrerquedula discors.

A LIST OF THE BIRDS SEEN AT FORT SNELLING WITH THE DATE WHEN FIRST SEEN.

MERULA MIGRATORIA.- Common June 1st; eggs June 3rd.

Mimus carolinensis.- Common June 1st; eggs June 3rd.

HARPORHYNCHUS RUFUS.-Common June 1st; eggs June 3rd.

TURDUS MUSTELINUS.-Common June 1st; several seen sitting on nests June 5th.

SIALIA SIALIS.-Common June 1st.

GEOTHLYPIS TRICHAS.-Common everywhere; singing. Seen June 1st.

AMPELIS CEDRORUM.-One small flock seen June 4th.

VIREO OLIVACEOUS.-June 1st; singing everywhere.

PIRANGA ÆSTIVA.-JUNE 1st; singing.

PROGNE SUBIS.—June 1st; common.

PETROCHELIDON LUNIFRONS.-Common June 1st; breeding.

CLIVICOLA RIPARIA.-Common June 1st.

HIRUNDO ERYTHROGASTRA.-June 1st.

MELOSPIZA FASCIATA.-June 1st ; eggs June 3rd.

SPIZELLA SOCIALIS.-June1st: common.

CHONDESTES GRAMMACA.-One; June7th.

GONIAPHEA LUDOVICIANA.-June 1st ; very abundant.

SPIZA AMOENA.-June 5th.

SPINUS TRISTIS.—June 1st; abundant.

POOECETES GRAMINEUS.-June 1st; abundant.

OTOCORIS ALPESTRIS.- June 1st ; evrywhere abundant; young flying.

QUISCALUS PURPUREUS aeneus .-June 1st ; abundant

AGELAIUS PHOENICEUS.-June 1st ; very abundant.

HOLOTHRUS ATER.-June 1st ; very abundant.

DOLYCHONYX ORYZIVORUS.-June 1st ; eggs June 3rd.

CYANOCITTA CRISTATA.-June 1st:VERY ABUndant.

TYRANNUS CAROLINENSIS.-June 1st; Very common.

CONTOPUS VIRENS .X-One ,June 3rd.

SAYORNIS FUSCUS.-June 1st ; abundant.

Chordeiles virginianus.- June 1st; common.

ANTROSTOMUS VOCIFERUS.-June 3rd.A common species.

CHAE/TURA PELASGIA.- June 1st ; very common.

CERYLE ALCYON.-JUne 1st ;common.

MELANERPES ERYTHROCEPHALUS.-June 1st;common.

COLAPTES AURATUS.-June 1st;common

ICTERUS GALBULA.-June 1st;very common.

Sturnella magna.-June 1st;common.

BUTEO BOREALIS.- June 1st;several seen since.

RALLUS VIRGINIANUS.-June 1st ; Eggs June 3rd.

FULICA AMERICANA.-June 1st ; common.

TROGLODYTES AEDON .- June 4th.

Tringoides macularius.- June 8th.

Coccyzus americanus.- June 8th.

Buteo borealis calurus

No. 6728 ♂ ad. Fort Snelling, Minnesota. March 15, 1890.

General color, above and below, gray, shaded on the upper back with grayish yellow, and with under tail coverts and under surface ~~creamy yellowish white~~. Redness of the tail consists black, the former barred with a large terminal white spot occupying the broad portion of their inner webs, the latter with terminal white spots of oval shape, the wing quills are black and white, ~~the pattern of the primaries and secondaries is the reverse of the same in the tail~~, viz., white at base, & black at the extremity, with considerable gray on the inner remiges & greater coverts, the remaining exposed portion of the coverts being black. The remiges for the greater part white at base, black terminally. The outspread wing appears black, ~~with a broad band of white~~ with a broad central white band, interrupted by a black band formed by the outer secondaries, whose exposed portion as well as that of the outer primaries, is mostly black. The inner primaries are edged with white on the outer edges, and the inner secondaries are mostly edged with white internally on their outer webs. The upper wing-coverts & scapulars are mostly grayish-yellow, the interscapular region gray at base. There are barely a few traces of black chin stripes. The upper & under tail-coverts are grayish white.

Parulidae — Wilsonia.

W. pusilla pusilla. Wilson's Warbler. Tucson, Oct. 10, 1890

Above, yellowish olive-brown changing to bronze-yellow on scapulars and rump; below yellowish olive-green, brighter yellow on sides of [illegible] and posterior [illegible] of abdomen; [illegible] iris, ~~[illegible]~~ with concealed band of yellow, which [illegible] behind over the eyes to the crown; and a black color extending across the forehead, bordering the mandible; [illegible] and [illegible] black; wings black, except the inner primaries and ~~[illegible]~~ greater coverts which are white (some tinged with yellow in adults, or creamy in younger birds) except at base

except a large white patch (often tinged with yellow in adults or creamy in younger, ~~[illegible]~~ birds) formed by the exposed portions of the inner ~~[illegible]~~ tertiaries and greater wing coverts; the concealed bases being black. Tail feathers, the upper coverts yellow, the outermost black, with yellow edges; bill black, edged with yellowish gray.

√ Empidonax ——— ? 6627 see measurements for species.
√ Empidonax traillii. – 7029,
√ Empidonax minimus. – 6900, 7064
√ Quiscalus. – 6388, 6396, 6563, 6568, 6569, 6615, 6876, 7070,
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5 Lynx canadensis baileyi 149

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17 Lutra canadensis

18 Procyon hernandezii

19 Ursus horibilis, 149

20 Ursus americanus 34, 149

21 Neotoma mexicana 23 33,

~~22 Hesperomys leucopis sonoriensis (19?)~~

23 Hesperomys ~~leucopis~~ eremicus (19?) anthonyi

~~24 Hesperomys leucogaster torridus (19?)~~

25 Arvicola ?

26 Sigmodon hispidus arizonae

27 Fiber zibethicus 30, 43, 43

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31 Lepus texianus 18, 34, 36, 41, 76.

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33 Castor fiber canadensis, 76. 149. 172

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35 Thomomys talpoides umbrinus

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37 Sciurus aberti

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Feb. 20, 1891. (From Piranga to Vireo, incl.)

Piranga erythromelas. – 6622, 6629, 6630, 6672, 7052, 7053, 7054,
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Vireo flavifrons. – 6863, 7176,

Vireo solitarius. –

[illegible] –

♈ ☉ Smelling Mission.

Spizella pusilla, - First seen - Oct 27th, 1888

Passerella iliaca. - First seen Oct. 17th, 1888 - Common, [illegible] [illegible] [illegible].

Loxia curvirostra americana A fine male calling loudly upon the big cottonwood-tree in front of the Hospital on Oct 27th, 1888.

Lanius borealis First seen Oct 28th and Oct. 29th 1888. One each day.

GENERAL ORDERS, No. 123.

HEADQUARTERS OF THE ARMY,
ADJUTANT GENERAL'S OFFICE,
Washington, October 15, 1890.

The following orders from the War Department are published for the information and guidance of all concerned:

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Fort Gibson, Indian Territory, declared by the President January 25, 1870, is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located in the Cherokee Nation, on the east bank of the Neosho (or Grand) River, contains 5,541 acres, more or less, and is embraced in the following-described boundaries, to wit:

Commencing at a point 720 feet south 15° 30′ west from the southeast corner of the quartermaster's store-house; thence south 81° 30′ east 885 feet; thence south 32° east 1,023 feet; thence north 78° 55′ east 1,736 feet; thence south 79° east 6,585 feet to the southeast corner of the reservation; thence north 9° 30′ east six miles; thence south 79° 30′ west 8,930 feet to a point in the center of Fourteen Mile Creek; thence following the course of said creek in a southerly direction to its confluence with the Grand River; thence down the Grand River, following its center, to a sandstone monument on the left bank marked U. S. R. on the one side and I. T. on the other, which constitutes the southwest corner of the reservation; thence south 64° west 560 feet to the point of beginning. (The points of the compass are true and not magnetic; variation 9° 30′ east.)

L. A. GRANT,
Acting Secretary of War.

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Fort Bridger, Wyoming, declared by President's order of July 14, 1859, reduced under the provisions of act approved February 24, 1871, entitled "An act to provide for the disposition of useless military reservations," and relocated by order of the Secretary of War June 24, 1871, is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located in the valley of Black's Fork, a tributary of Green River, in Uinta County, Wyoming; embraces portions of townships 15 and 16 north, range 115 west, 6th principal meridian; contains 16 square miles, or 10,240 acres, more or less; and is embraced in the following-described boundaries, to wit:

Commencing at a point 1 mile due west of the flag-staff of the fort; thence running north 2 miles; thence east 2 miles and 40 chains; thence south 6 miles and 32 chains; thence west 2 miles and 40 chains; thence north 4 miles

and 32 chains to the point of beginning. (The points of the compass are true and not magnetic; variation 17° 24′.)

L. A. GRANT,
Acting Secretary of War.

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Fort Verde, Arizona, declared by the President March 30, 1870, and enlarged by President's order of April 17, 1876, is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located on the right bank of the Rio Verde, one-half mile south of its junction with Beaver Creek, in Yavapai County, Arizona; contains 9,293.79 acres, more or less; and is embraced in the following-described boundaries, to wit:

Commencing at a post in mound of earth marked "Mil. Res., 1876," at the south corner of the northeast quarter of section 7, and south corner of the northwest quarter of section 8, township 13 north, range 5 east, Gila and Salt River meridian, which post bears south 3° 12′ west 164.70 chains from the flagstaff of the post; thence north 87° 12′ west 80 chains to post in mound of earth marked "S. W. corner Mil. Res., 1876;" thence north 23° 15′ west 411.17 chains to post in mound of earth marked "N. W. corner Mil. Res., 1876;" thence north 48° 12′ east 142 chains to post in monument of stones marked "U. S. M. R., 1876;" thence south 87° 12′ east 77.20 chains to post in mound of earth marked "N. E. corner Mil. Res., 1876;" thence south 23° 15′ east 476 chains to post in mound of earth marked "S. E. corner Mil. Res., 1876;" thence north 87° 12′ west 160 chains to point of beginning. (The points of the compass are true and not magnetic; variation 14° 25′ east.)

L. A. GRANT,
Acting Secretary of War.

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Fort Elliott, Texas, purchased October 28, 1889, from William Walter Phelps, under authority of the act approved March 2, 1889, is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located in the county of Wheeler, State of Texas; contains 2,560 acres, more or less; and includes sections 47, 53, 55, and 67, in block 5 A, Wheeler County, Texas.

L. A. GRANT,
Acting Secretary of War.

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved

July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Little Rock Barracks, Arkansas, deeded to the United States May 9, 1837, by Richard C. Hawkins and wife, John McLain and Elizabeth, his wife, and Noah H. Badgett and Lucetta, his wife (deeds recorded in Book J, pages 52–55, office of the clerk circuit court, Pulaski County, Arkansas), is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located in the city of Little Rock, county of Pulaski, State of Arkansas; contains 36.01 acres, more or less; is bounded on the north by 9th street, on the south by 13th street, on the east by MacAlmond street, and on the west by the west line of the old Quapaw Reservation.

L. A. GRANT,
Acting Secretary of War.

WAR DEPARTMENT, *Washington, October 14, 1890.*

By authority of the President of the United States, dated October 2, 1890, and under the provisions of the first section of the act of Congress approved July 5, 1884, entitled "An act to provide for the disposal of abandoned and useless military reservations," the military reservation of Fort Crawford, Colorado, declared by President's order dated March 12, 1884, and reduced by President's order dated July 22, 1884, is hereby transferred and turned over to the Secretary of the Interior for disposition, as provided in subsequent sections of the aforesaid act, the same being no longer required for military purposes.

The said reservation is located in the valley of the Uncompahgre River, Montrose County, Colorado; contains 8.55 square miles, or 5,472 acres, more or less, and embraces part of section 21, south ½ of section 22, south ½ of sections 21 and 23; part of southwest ¼ of section 24; part of section 25; all of section 26; parts of sections 27, 28, and 34; all of section 35; part of section 36, in township 48 north, range 9; part of section 31, in township 48 north, range 8; part of section 6, township 47 north, range 8; and parts of sections 1, 2, 11, and 12, in township 47 north, range 9; all west of New Mexico principal meridian.

L. A. GRANT,
Acting Secretary of War.

BY COMMAND OF MAJOR GENERAL SCHOFIELD:

SAM'L BRECK,
Acting Adjutant General.

OFFICIAL:

Assistant Adjutant General.

1 Rock Sturgeon or Slender
2 Sturgeon, Shovelled-nose
3 Sturgeon, Channel Cat,
4 Black Cat, Yellow Cat,
5 Large mouthed Black Bass
6 Small " " "
7 Rock Bass
8 Wall Eyed Pike
9 Yellow Perch
10 Pickerel
11 Pike
12 Muskalonge
13 Red & spotted Sunfish
14 White Bass
15 Striped Bass
16 Lamprey
17 Stickle-Back
18 Dace
19 Red Horse

20 Long Finned Sucker.
21 Sucker
22 Gar
23 Minnows
24 Eel
25 Croppie
26 Hickory Shad
27 Shiner
28 Sheepshead
29 Buffalo.

Pickerel, Wall Eyed Pike, Black Bass, Rock Bass, Croppie, Bull Head, Blue Channel Catfish, Buffalo, Sheepshead, Garfish, Perch, Sunfish with red spot on their gills, large slaty colored sunfish, and sunfish without a red spot on their gills, 2 species of suckers, muskalonge, 2 kinds of sturgeon, shiners, squaw-fish, eels.

1 Snapper.
2 Leather Turtle.
3 Chrysemys marginata.
4 Wood Terapin.
5 Musk Turtle.

---

6 Red Bellied Terapin
7
8

Little green snakes
Rattlesnakes
Garter-Snakes
Bull or Pine Snake
Blue Racer
Red Belled Snakes

Wolf Bounties.

County Treasurer Peterson this morning paid wolf bounties to Charles Moorehouse and Stephen Potter. The animals were shot near Maple Grove. Three bounties have been paid so far this year, making 98 bounties paid in this county since the law went into effect.

The Tribune.

EVENING EDITION.

—BY—

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THE TRIBUNE is on sale at the principal hotels in New York, Chicago, Boston, Washington and St. Paul.

MONDAY, JANUARY 11, 1892.

WEATHER INDICATIONS.

CANNIBALISM AND GREELY EXPEDITION.

LIEUTENANT KISLINGBURY'S BROTHER CONTROVERTS STATEMENTS BY SURVIVOR.

To the Editor of The Tribune.

Sir: In perusing the evening press I was astonished at the article from your columns of December 19 in relation to my brother's diary, which brings my name in controversy with Maurice Connell. I would like to refresh Mr. Connell's memory by saying that the diary he refers to was recovered at Camp Clay, near Cape Sabine, where the survivors of the Greely party were rescued by Commander Schley, and said diary was taken to Washington, where it was kept for nearly two years before being turned over to Charles L. Clark, of Detroit, in a very dilapidated condition. This diary did not contain any revelations of cannibalism, and I never made a statement to the effect that it did.

I have recently been informed that Lieutenant Peary has, during the last year, recovered the diary my brother left at Fort Conger in 1883, which will, I hope, bring to light the difference of opinion my brother, Lieutenant Kislingbury, had with Mr. Greely. Thus you see that Mr. Connell, being misinformed about the diary, has misrepresented its contents. He, with some of his comrades, has, I know only too well, kept silent and allowed the commander to be the mouthpiece of the expedition. I do not wish to put a blot on Mr. Connell's good name or on that of any subordinate survivor of the ill-fated expedition.

Connell says there was no cannibalism. I claim there was. The exhuming of my brother's body and that of Private Whistler a week later proved it. Will Mr. Connell tell me why the shooting of Henry was not disclosed until after the raising of my brother's body, and why my brother, second officer in command of the expedition, should die from starvation on June 1 and Private Henry be shot six days later on the charge of stealing provisions? Also, why Dr. Pavy's body was never recovered, as his death was recorded to have occurred the same day as Henry's?

It is simply in the interest of truth and for the sake of justice to his dead comrades that I ask Mr. Connell to answer these questions, since he has said he will no longer keep silent.

I have never made a statement to "The Springfield Republican," and the one published in that paper is utterly false and unauthorized by me.

JOHN P. KISLINGBURY.

Rochester, N. Y., Dec. 20, 1901.